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The Physiology of the Circulation. A Course of Lectures delivered in the College of Physicians and Surgeons, New York, in the Fall Term of 1859. By JOHN C. DALTON, JR., M.D., Professor of Physiology and Microscopic Anatomy.

LECTURE XII.

(OCTOBER 15.)

The Lymph and the Lymphatics—Analogy with the Blood and Blood-vessels—Origin and Course of the Lymphatics—Structure of the Lymphatic Glands—Lymphatics not the Exclusive Agents of Absorption—Constitution of the Lymph—Its Variations—Lymph and Chyle—Mode of Obtaining these Fluids—In Ruminating Animals—In the Dog—Appearance and Properties of the Chyle—Coagulation—Contraction and Redness of the Clot—Mixture of Blood—Source of this Mixture—Appearance of Chyle at Different Periods—Experiments—Total Quantity of the Chyle and Lymph—Interchange of Animal Fluids—Conclusion.

The history of the circulation, gentlemen, would be very incomplete if we were to confine our attention altogether to the blood and blood-vessels. For beside the sanguiferous system proper, there exists in the body another exceedingly extensive and important system of ves-

sels, containing a fluid rich in animal and saline ingredients, viz.: that of the *absorbents* or *lymphatics*.

These vessels may be regarded as secondary or supplementary to the blood-vessels, since they are connected with the sanguiferous system by various communications, and since the fluid which they contain resembles, in several of its ingredients, the plasma of the blood. The great peculiarity of the lymphatic system, however, is this: that while the blood in the sanguiferous vessels passes alternately, through two sets of capillaries, from the arteries to the veins and from the veins to the arteries, thus returning in a continuous circle, the lymph moves through the lymphatic vessels only from without inward. The lymphatics, as we know, originate by minute capillary plexuses in the substance of the organs and tissues; and, pursuing their course from without inward, terminate finally in the great veins near the top of the chest. There is no diverging system of lymphatic vessels, corresponding with those which converge toward the centre; and consequently there is no *circulation* of the lymph, strictly speaking, in the same sense as there is a circulation of the blood. The lymph, as we shall find, is supplied by exudation from the substance of the tissues and organs, and is constantly poured into the current of venous blood, as it returns toward the right side of the heart.

But, after all, there is no such great difference, in this respect, between the blood and the lymph as we might be disposed to believe. For we have already seen that the blood does not pass through the capillary vessels as a system of inert tubes, but is incessantly changed in constitution during its passage. It gives up many of its ingredients to the surrounding parts by exudation, and in return absorbs from them a multitude of new substances. So that the venous blood is composed in large quantity of ingredients which have been supplied by the tissues themselves; and these are brought back to the heart by the venous current, without having penetrated directly into it from the arteries. The fluid in the lymphatic vessels, therefore, and the blood in the veins, are both derived, to a great extent, from the same source. The processes of exudation and absorption in the tissues give rise to a certain quantity of materials, part of which are taken up by the veins, and part by the lymphatics; and both are then conveyed inward by these two sets of vessels to the centre of the circulation, and there mingled with the general mass of the circulating fluid. It is easy to see, then, that the lymphatic vessels really form an integral part of the great circulatory system.

Let us see what are the anatomical peculiarities of these vessels, and their relation to the organs and tissues.

The lymphatics may be regarded as a system of vessels more particularly connected with the *membranous parts* of the body, viz.: the skin, the mucous membranes, the serous and synovial surfaces, and the inner tunic of the arteries and veins. For though it is very probable that they also originate in the deeper portions of the organs, yet their commencement has only been demonstrated by injections in the parts which I have mentioned. So far as we can ascertain, they begin here, as I have already said, by vascular networks or plexuses. These plexuses are not very unlike those of the capillary blood-vessels in certain parts; and the minute lymphatics uniting gradually with each other, form the efferent canals which pass onward from the membranous tissues toward the heart.

Now this is all that it is possible to say with absolute certainty in regard to the commencement of the lymphatic system. Notwithstanding the resemblance in form between the capillary plexuses of the lymphatics and the blood-vessels, it is most probable that they are quite distinct from each other anatomically. It has been supposed, at various times, that there might be communications between them, and even that the lymphatic plexus might be a direct continuation of that originating from the smaller arteries; so that the more fluid and colorless portions of the blood might pass directly from the terminal blood-vessels into the absorbent system. Even Milne Edwards at one time entertained this view; but he has since abandoned it, and declares his conviction that the anatomical evidence is in favor of a complete separation between the two vascular systems.

At all events, so far as we can rely upon minute examination, the commencement of the lymphatic system is absolutely in the substance of the membranous tissues, and is independent of the arteries and capillary blood-vessels.

But there is another peculiarity of these lymphatics, which is equally important with their independent origin: that is, their relation with the lymphatic ganglia, or glands. After passing for a short distance from without inward, the lymphatic vessels pass into the substance of certain glandular-looking bodies, situated generally in the flexures of the joints, in the mesentery, on the anterior aspect of the spinal column, &c.; and then, emerging from the other side of these glands, pass onward a certain distance farther, when they enter another series of glands of the same kind, thus passing in succession through several sets of glandular organs, before they finally terminate in the great veins near the heart.

As to the precise arrangement of the lymphatic vessels in the interior of the glands, we know that after entering the glands they at once

break up into minute branches, which become excessively convoluted and intertwined with capillary blood-vessels, and then, by uniting again, give origin to new trunks, which leave the gland on its opposite surface. They are probably continuous throughout with each other, and quite disconnected with the blood-vessels, except by intimate contact and adhesion. According to M. Colin, of Alfort, beside the minute and convoluted vessels, there are always some large branches, which pass directly through the gland, from the afferent to the efferent vessels; so that only a portion of the lymph in each gland is distributed to its ultimate glandular plexus. This portion, however, in passing through these organs, is evidently subjected to some glandular influence, which may serve to modify its composition.

Now even this peculiarity is not altogether a distinctive one, as between the lymphatics and the blood-vessels. For the blood, also, as we know, in the course of its circulation, passes through certain glandular organs, such as the thyroid and thymus glands, the spleen, the supra-renal capsules, &c., in which no proper secretion is formed, but only a change of constitution effected in the blood itself. No doubt, a somewhat similar process takes place, in the absorbent glands, for the lymph.

After passing through these glandular organs, the lymphatic vessels, derived from the external surfaces and the internal organs, unite into two great trunks: the *thoracic duct*, which collects the fluid of the absorbents from the lower extremities, the intestines and other abdominal organs, the left upper extremity, and the left side of the head and neck, and terminates in the left subclavian vein, at the junction of the internal jugular; and the *right lymphatic* duct, which collects the fluid from the right upper extremity and right side of the head and neck, and empties into the right subclavian vein, at a corresponding point with the other.

Thus nearly all the lymph from the external parts, and the whole of that from the abdominal organs, passes, by the thoracic duct, into the left subclavian vein.

I need not remind you that during nearly the whole of their course, the lymphatics are provided with valves, like those of the veins, arranged generally in pairs, which prevent, to a certain extent, the reflux of the lymph.

Such, gentlemen, is the anatomical arrangement of the lymphatic or absorbent system. Now let us see what is the nature of the fluid which it contains, and what is its relation to the other animal fluids.

But, in the first place, I must remind you, that the exclusive idea

which was once entertained, with regard to the function of these vessels, has been given up for a long time. They were once named *absorbents*, because they were thought to possess exclusively the power of imbibing foreign substances. The absorption of medicines and poisonous substances, and the disappearance of tumors, were thought to be accomplished altogether through the medium of these vessels. Even the digested food was supposed to be taken up exclusively by the lacteals, (which are only the lymphatics of the intestine,) and the chyle in these vessels was thought to represent the entire product of digestion. We now know, however, how different the truth is from this. For absorption takes place by the capillary blood-vessels even more rapidly and abundantly than by the lymphatics; and almost any absorbable substance, exposed to a vascular surface, will pass into the blood directly, with much greater facility, than it can go round by the lymphatics and thoracic duct.

The lymphatics, therefore, are not by any means to be regarded as the special or exclusive organs of absorption. Still they are scattered so abundantly throughout the body, and do actually imbibe from the various parts so large a quantity of material, that their function is evidently an important one, and the fluid which they contain deserves to be examined in every respect with interest.

The lymph has only been obtained in a state of purity since experimenters have adopted the practice of operating upon the living animal in such a way as not to interfere seriously with the phenomena of the circulation. It has been obtained by Rees from the lacteal vessels and the lymphatics of the leg in the ass, and by Colin from the lacteals and thoracic duct of the ox, and from the lymphatics of the neck in the horse. I have frequently obtained it myself, from the thoracic duct of the dog and of the goat.

The analysis of these fluids shows, in the first place, a remarkable similarity between them and the plasma of the blood. They contain water, fibrin, albumen, fatty matters, and the usual saline substances, such as chlorides, phosphates, and the like, which occur in nearly all the animal fluids. At the same time, the lymph is decidedly poorer, in its albuminous ingredients, than the blood. All these particulars may be seen at a glance by referring to this analysis, by Lassaigne, of the fluid obtained by Colin, from the thoracic duct of a cow.

Water	964.0	parts per thousand.
Fibrin	0.9	" "
Albumen	28.0	" "
Fat	0.4	" "

Chloride of Sodium	5.0	parts per thousand.	
Carbonate, Phosphate and Sulphate of Soda.....	1.2	"	"
Phosphate of Lime.....	0.5	"	"
	1,000.0		

Almost the first thing, however, that is noticed in experimenting upon this fluid, especially in the carnivorous animals, is, that its constitution varies very much at different times. In the ruminating and graminivorous animals, such as the sheep, ox, goat, horse, &c., it is either opalescent in appearance, with a slight amber tinge, or nearly transparent and colorless. In the carnivorous animals, such as the dog and cat, in the intervals of digestion, it is also opaline and amber colored, but soon after feeding, becomes of dense, opaque, milk-white, and continues to present that appearance until the processes of digestion and intestinal absorption are completed. It then regains its original aspect, and remains opaline or semi-transparent until digestion is again in progress.

The cause of this variable constitution of the fluid discharged by the thoracic duct is evidently the absorption of fatty substances from the intestine in digestion. We know that whenever fatty substances exist in considerable quantity in the food, they are emulsioned in the intestine by the action of the pancreatic and intestinal juices, and reduced to a white, creamy mixture of molecular fat, suspended in an albuminous menstruum. This mixture is then absorbed by the lymphatics of the mesentery, and transported by them through the thoracic duct to the subclavian vein. While its absorption is going on, therefore, the fluid of the thoracic duct alters its appearance, becomes white and opaque, and is then called *chyle;* so that there are two different conditions, in which the contents of the great lymphatic trunks present different appearances. In the fasting condition, these vessels contain a semi-transparent, or opaline and nearly colorless lymph; during digestion, an opaque, milky chyle. It is on that account that the lymphatics of the mesentery are called "lacteals."

The chyle, accordingly, is nothing more than the lymph which is constantly absorbed by the lymphatic system everywhere, with the addition of more or less fatty ingredients taken up from the intestine during the digestion of food.

Now, the chylous matter itself is not absorbed altogether by the lacteals. On the contrary, a very large proportion of it is taken up by the blood-vessels of the intestine and carried away by the portal

vein. I have already shown you in a previous lecture some of the portal blood of a dog, drawn during digestion, which contained an abundance of chylous matter, and in which the serum was very distinctly turbid and milky in appearance. Here, then, is still another point of resemblance between the lymphatic and venous circulations. In the intervals of digestion, both the lymph coming from the intestine, and the serum of the portal blood, are nearly transparent; during digestion, they both become turbid and milky from the same cause, viz., the absorption of fat.

The results of analysis show positively that the varying appearance of the lymph is really due to this cause, as you will see from this table, in which the comparative analysis, by Dr. Rees, of the lymph and chyle of the same animal, are placed side by side.

	Lymph.	Chyle.
Water	965.36	902.37
Albumen	12.00	35.16
Fibrin	1.20	3.70
Spirit Extract	2.40	3.32
Water Extract	13.19	12.33
Fat	traces.	36.01
Saline matters	5.85	7.11
	1,000 00	1,000 00

Though the chyle is also richer in albuminous matters than the lymph, it is evident that the principal difference between them consists in the proportions of fat which they contain.

The best mode of obtaining the chyle in abundant quantity is to expose the thoracic duct at the root of the neck, where it turns over to join the left subclavian vein, and insert into it a small silver canula, which should be secured by a ligature. If the operation be successful, the fluid will then continue to flow from the end of the canula, and can be collected for examination.

The experiment is most easily performed upon the ruminating animals, since, in them, the termination of the thoracic duct is comparatively superficial, and may be exposed without making too extensive a wound. I have succeeded very well in the goat, by etherizing the animal, exposing the duct, and inserting the canula, and then allowing the effects of the etherization to pass off. In the course of an hour or two, the animal will be sufficiently recovered to feed readily, and the chyle then begins to flow with considerable freedom from the end of the canula. It is noticeable, however, in the case of the chyle, as it is with almost all the other animal fluids, that its flow is not uni-

form, but that it is discharged quite abundantly for a few moments in succession, then becomes scanty, or almost stops, and after a short interval is again discharged with rapidity, as before. These two conditions alternate with each other, somewhat irregularly, throughout the whole course of the operation.

The following experiment will show the mode in which the chyle was collected in these cases:

Experiment, March 16th, 1859.—A young kid, weighing fourteen pounds, was etherized, and a canula inserted into the thoracic duct at the root of the neck. Lymph immediately began to flow freely. The animal soon recovered from the etherization, and fed readily on chopped potato and cabbage-leaves. In three hours and a half, 1,890 grains of fluid were collected from the canula. The lymph was, for the most part, opaline and slightly amber-colored; though at times it was nearly transparent and colorless. It coagulated very readily, and the clots afterward contracted, assuming a rosy tinge, while the serum remained opalescent and nearly colorless. There was, at no time, any milky opacity in this instance. The lymph smelt strongly of ether, twenty-four hours afterward.

In the dog, this plan of operation is not usually successful, since the termination of the thoracic duct lies very deep, and requires a somewhat extensive and laborious dissection to reach it in the living subject. Beside, these animals refuse food for many hours after having been fully etherized, and their digestive process remains more or less suspended during the same time. The plan which I have found most successful in them is to produce insensibility by the inoculation of woorara, and then to expose the duct, and insert the canula into its extremity, keeping up artificial respiration during the mean time, by means of a bellows inserted into the trachea. This can be done either during the intervals of digestion, or while the process is actually going on, and the appearance and quantity of the lymph and chyle can be ascertained at these different periods.

Here is some chyle which was obtained yesterday, in this manner, from a dog, while digestion was in progress. You see it is a perfectly white milky, or rather cream-like fluid, very abundant, and evidently rich in organic ingredients. It has coagulated firmly, showing the presence of fibrin; and, you observe, in some of the test-tubes the clots have contracted considerably, and at the same time, a milky serum has separated from them, which remains permanently fluid.

A remarkable fact in regard to these clots is that, as they contract in size after having solidified, they almost always assume more or less of a rosy tint. That is the case with those which we have here. Various opinions have been expressed as to the cause of this redness of the clot in chyle and lymph, but a little direct examination is sufficient to determine the question. The microscope shows that it is owing to the presence of blood-globules which are to be found, in small quantities, in the substance of the coagulum.

The blood-globules are discharged with the chyle, at the time when it is drawn from the thoracic duct. And I have often noticed, in doing this experiment, that the chyle which is first discharged, immediately after the insertion of the canula into the duct, is of a perfectly pure opaque, chalky-white. When a drachm or two of it is collected in the test-tube, it has not exactly the color of milk or cream, but looks more like a thick magma of chalk or calcined magnesia with water. But after the process has been going on a short time, the fluid begins to assume a slight yellowish tinge, and then looks like milk or cream. Still later it often presents, for a few minutes, a decidedly pinkish hue; but this is so slight in intensity, and the quantity which presents it so small, that it disappears, for the most part, when mixed with the rest of the chyle. However, this color is always found, on examination, to be due to the presence of blood-globules in appreciable quantity.

Now it is important to know how this blood becomes mingled with the chyle.

Some have thought that the blood-globules are actually produced in the chyle itself; that they grow and are developed in the fluid, as it passes through the lymphatic vessels and the thoracic duct. But this opinion has not met with general adoption. Others have been led to the belief that there must be some normal communications between the sanguiferous and lymphatic systems, through which the blood-globules gain entrance. The constancy with which blood or its evidences have been found, in small quantity, in the chyle and lymph, by all observers, has been thought to prove that these communications exist, though they must be very minute and few in number.

But there is still a third opinion in regard to this matter, which I am very much inclined to believe is the correct one. I have already told you, that when the chyle first begins to run from the thoracic duct it is almost always perfectly white, and free from blood. It is only after it has been running for a certain time, that blood-globules begin to be mingled with it; and, as a general thing, the longer the

experiment is continued, the more constant and more abundant is the admixture of blood. This makes it exceedingly probable that the presence of blood in the chyle is not a normal, but an accidental occurrence; and that it is due to the disturbance of the circulation produced by the conditions of the experiment itself. The narcotized condition of the animal, and the artificial respiration which is practiced, may undoubtedly be sufficient to cause local obstructions of the circulation, in various abdominal organs, and particularly in the mesenteric glands. When we remember how intimately the blood-vessels and lymphatics are mingled in these glands, it is easy to see that a congestion here may readily give rise to a slight admixture of blood with the chyle, by the rupture of capillary vessels.

But how is it that the clots which form in the lymph and chyle become red after their coagulation, when no such color was visible before?

This circumstance has been considered as a very singular one, though it is in reality quite easy of explanation. Before coagulation, a very small quantity of blood-globules are disseminated through the whole mass of the chyle, and are so scanty, in proportion to the other ingredients, that no reddish color is perceptible in the fluid. But where coagulation takes place, the clot entangles the blood-globules in its substance, precisely as it happens in the coagulation of blood. Then, when the clot contracts and expels the serum, all the blood-globules are retained in its meshes, and as it diminishes in size, it becomes reddish or rosy in tinge, simply because the color which was before disseminated through a large mass of fluid, is now concentrated in the solid coagulum.

The following experiment will show the characters which belong to the lymph in the thoracic duct of the dog, while in a fasting condition, and when he has been a long time without food containing fat.

Experiment, Feb. 25th, 1859.—A healthy dog weighing thirty-two pounds was kept without food for forty-eight hours. He was then fed with about half a pound of perfectly lean meat. He then had no food till twenty-four hours later, when he received one pound of similar lean meat. Next day at 9 A. M., he was inoculated with woorara, and a canula inserted into the thoracic duct, at the root of the neck. Lymph began to flow from the canula at ten o'clock, that is, eighteen and a half hours after feeding, and at least three days and a half after the last meal of fat meat.

In one hour, 425 grains of lymph flowed from the canula. At first it was of a very light opaline appearance, with a slight amber tinge;

then for ten or fifteen minutes, rather more whitish and opaque; then opaline and amber-colored as before. It coagulated very readily, and a prompt separation took place between the clot and the serum. After standing for twenty-four hours, the volume of the serum was a little more than twice as great as that of the contracted clot.

The serum was slightly alkaline in reaction. When viewed in thin layers, it was only a little opalescent; but, when collected in a test-tube or precipitating glass, it was strongly opaline, and of a rather dingy hue, like a thin solution of boiled starch. This lymyh had none of the white milky look which belongs to the chyle; but still it was strongly opaline, and was very far from presenting a clear and transparent appearance. The serum, spread out in thin layers, and examined by the microscope, showed only a multitude of molecular granulations, so excessively fine that they might easily be overlooked, and appearing only as a faint *shading* over the field of the microscope. The serum also contained some red and white blood-globules.

The clot, after some hours' exposure and contraction, became, in parts, quite rosy in tinge. It was firm in consistency, and, when examined under the microscope, showed evident traces of fibrillation, like the coagulum of blood. Those parts which were rosy in color contained an abundance of red globules, and also a number of rounded, granular, colorless corpuscles, which were not soluble in dilute acetic acid, but were only rendered more distinct and granular by that reagent. These were the only corpuscles visible in such parts of the clot as remained white.

On boiling some of the serum in a test-tube, it became more whitish and opaque, but did not solidify. Even when previously acidified by the addition of a small quantity of muriatic acid, boiling did not produce in it any more marked change. Nitric acid, on the contrary, threw down a dense, white, flocculent coagulum.

The blood of the thoracic veins in this case coagulated readily, and the coagulum afterward exuded a perfectly clear and transparent serum.

The stomach was perfectly empty. The small intestine contained in its upper part only a little frothy and yellowish bilious-looking fluid, and at its lower part, a moderate quantity of rather thick, dark-brown, or olive-colored material. The middle portions of the intestine were entirely empty.

But very soon after digestion has commenced, the chyle becomes white and opaque, as shown in the following experiment:

Experiment, March 15th, 1859.—A dog, weighing thirty-three and

a half pounds, was fed at half past twelve o'clock with fat and lean meat, and at half past three, P. M., a canula was inserted into the thoracic duct, the animal having been previously poisoned with woorara, and artificial respiration established in the usual way.

During the next two hours and a half, 2,510 grains of opaque, white and faintly rose-colored chyle flowed from the canula. This chyle coagulated, like the other specimens; the clots, as they contracted, becoming more distinctly rose-colored, and the serum remaining of a pure opaque white. At the end of forty-eight hours the serum was much larger in volume than the clot.

Notwithstanding the almost constant admixture of blood in small quantity with the chyle, if the experiment be much prolonged, the chyle may sometimes continue to run, perfectly pure and unmixed with blood, for at least an hour after the insertion of the canula, and two hours after the commencement of the operation. This was the case in the following experiment.

Experiment, February 21*st*, 1859.—A healthy dog, weighing twenty-four and a half pounds, was fed with a mixture of fat and lean meat. Two and a half hours afterward he was inoculated with woorara, artificial respiration established, and a canula inserted into the thoracic duct, at the root of the neck. The operation was finished, and chyle began to flow, three hours and a quarter after the time of feeding. In one hour, 240 grains of chyle flowed from the canula. It was perfectly opaque, and of a white color, with an exceedingly faint tinge of amber. It coagulated almost as fast as it was withdrawn from the duct.

After coagulation, the clot contracted to such an extent that at the end of twenty-four hours the clot and serum were nearly equal in volume. This clot did not become in the least rosy on exposure to the air, even at the end of twenty-four hours; and the microscope showed no red globules in its substance, but only colorless and fatty molecules. The serum was almost or quite as opaque as the clot.

After the chyle has once become opaque and milky, in consequence of the commencement of the digestive process, it continues to present the same characters for several hours. At least this is the case in the carnivorous animals, in which the digestive process is comparatively slow. In the dog, the chyle continues milky for at least seven or eight hours after digestion has commenced.

Experiment, February 16*th*, 1859.—A healthy dog, weighing fifteen pounds and a half, was fed at 8 A. M. with moderately fat meat. At 2 o'clock, P. M., he was inoculated with woorara, and as soon as the

poison had operated and artificial respiration was established, the thoracic duct was exposed at the root of the neck, and a canula inserted into it. The operation was terminated, and the canula fixed in its position at 3 P. M.; that is, seven hours after the time of feeding.

The chyle then flowed from the canula in the following quantities:

During the first half hour	464 grains.
" second "	376 "
In the whole hour.....	840 "

This was, in volume, fourteen fluid drachms.

The chyle which flowed during the first fifteen or twenty minutes was of a perfectly pure opaque white; but that which flowed subsequently, and especially during the last half hour, had a very faint and delicate rosy tinge. It was all quite fluid, but coagulated soon after being withdrawn from the canula.

After coagulation, a separation slowly took place between the clot and serum; so that at the end of twenty-four hours, the serum which had been exuded was equal in volume to the clot, and at the end of forty-eight hours considerably larger.

Portions of the clot became, in a few hours after coagulation, of a very distinct rosy hue; but the serum remained of a nearly pure, opaque, uniform white. Examined by the microscope, the serum showed a multitude of fatty molecules, too minute for measurement, and a very few white and red blood-globules. The clot showed a very distinct microscopic fibrillation, and in those parts which had become most rosy in tinge; an abundance of red blood-globules.

Even so late as thirteen hours after feeding, the chyle still has a strongly-marked opacity and white color. In the following experiments the chyle was examined for sugar, and also for the elements of the bile, but neither of these substances was found in it.

Experiment, February, 1859.—A very vigorous and well-conditioned dog, weighing thirty-one pounds, was inoculated with woorara twelve hours after feeding on mixed lean and fat meat. As soon as the breathing stopped, artificial respiration was established, and a canula was then inserted into the thoracic duct at the top of the chest, and secured by ligature, so as to exclude all the lymphatic branches coming from the neck and shoulder. The operation was finished and chyle began to flow through the canula, thirteen hours and a quarter after the animal had been fed.

The chyle then ran from the canula in the following quantities:

During the first hour.....222 grains.
" " second " .....208 "

In two hours.....430 grains.

Making, by volume, seven fluid drachms.

This chyle was quite whitish and opaque, though not absolutely milky in appearance. It had a slightly alkaline reaction. It coagulated rapidly in the test-tube, forming a rather loose gelatinous clot; so that it resembled, after coagulation, soft-boiled white of egg, both in consistency and appearance. It exuded, after a time, a watery-looking opaline serum.

The chyle was then examined in the following manner: The whole of it was evaporated to dryness by the water-bath, leaving 29.5 grains of solid residue. The dry residue was then extracted with ether. The ethereal solution was of a clear, light yellow color. It became turbid on the addition of water; and, after standing for some time in the test-tube, a thick yellowish-white fluid layer collected on the surface of the mixture. This layer, examined by the microscope, showed a great abundance of circular fluid oil-drops.

The remainder of the dry residue, which was undissolved by ether, weighed 22 grains. It was treated with 5 fluid drachms of alcohol, (at 95 per cent.,) and the alcoholic solution, which was nearly colorless, precipitated freely with ether in excess. After standing in the test-tube for nearly twenty-four hours, a white precipitate had collected at the bottom of the tube. This precipitate was freely soluble in water; but the watery solution, on being treated with Pettenkofer's test for bile, gave no evidence of the presence of the biliary substances.

A part of the same alcoholic solution was evaporated to dryness, and the residue dissolved in distilled water. The watery solution was then treated with Trommer's test for sugar, but gave no indication of the presence of that substance.

The stomach of this animal contained a few remains of partially digested muscular tissue, but no perceptible quantity of fat. The small intestine was nearly empty, containing only a little greenish, pasty, semi-fluid matter.

These, gentlemen, are the appearances presented by the chyle, when drawn from the thoracic duct at various periods of the digestive process. Let us now see what is the mechanism by which the contents of the lacteals and lymphatics are conveyed through the vessels of the absorbent system, and finally discharged into the current of the venous blood.

And in the first place, the most important of the forces, by which the lymph and chyle are propelled through their vessels, is that by which they are originally absorbed and taken up by these vessels. Throughout the entire extent of the lymphatic system an extensive process of endosmosis is incessantly going on, by which the ingredients of the lymph are incessantly imbibed from the surrounding tissues, and compelled to pass into the lymphatic vessels. The lymphatics are in this way constantly filled at their origin; and, by mere force of accumulation, the fluids, after filling their own vessels, are compelled to discharge themselves into the large veins at which the lymphatic trunks terminate.

But the motion of the fluids in the lymphatic system is hastened by various other means in the living body.

Of these means, the movements of respiration are among the most important. As the chest expands, the backward pressure is partly lifted off from all the vessels contained in its cavity, and the resistance to the onward flow of the lymph and chyle diminished. During expiration, on the other hand, the reflux of the fluids is prevented, to a great extent, by the valves of the lymphatic vessels; and consequently, by the alternate motions of expansion and collapse, the fluids are gently solicited toward the chest, and urged forward through the thoracic duct.

A similar effect is produced by the movements of the trunk and limbs. For, as the muscles contract, they compress the lymphatics, and drive their contents onward toward the heart, their valves still preventing a reflux; and by a repetition of such motions the lymph is incessantly driven from the more distant to the more central parts of the vascular system.

You will already notice, gentlemen, that here is still another resemblance between the lymphatic and venous systems. For it is precisely by these movements of the chest and the voluntary muscles, that the venous blood is hastened on its course, and assisted in its movement from the extremities toward the heart.

In experimenting upon the thoracic duct in the manner which I have described, it is easy to see that the movements of the heart and arteries influence, very often, the discharge of the fluids from its orifice. For the thoracic duct, as you will remember, crosses the spinal column, in the chest, directly behind the arch of the aorta; and in this situation it is exposed to very considerable pressure by the great arterial trunk. It very often happens, therefore, that when a canula is inserted into the thoracic duct in the living animal, the chyle is seen to be

forcibly projected from its extremity at each arterial pulsation. I have frequently observed this, and the appearance is sometimes very striking and peculiar, the white milky stream passing out from the end of the canula in interrupted jets, like blood coming from a small artery, when the circulation is somewhat enfeebled.

But when artificial respiration is employed, as in the experiments which I have performed, with woorara as the stupefying agent, the influence of the respiratory movements is modified in a curious manner. In natural breathing, that part of the thoracic duct which is contained within the thoracic cavity, is filled by the expanding movement of the chest, and emptied by its collapse; so that the discharge of the chyle from the extremity of the duct is increased at the moment of expiration, and diminished, or suspended, at the moment of expiration. But in artificial respiration, where the lungs are filled by direct insufflation, and not by a movement of inhalation, the effect is exactly the opposite. For then the chyle is discharged abundantly at the time of insufflation, when the lungs are filled and the other thoracic organs compressed; and in the interval it becomes scanty, or ceases altogether. However, this is evidently dependent on the unnatural mechanism of the respiratory movements, and has no relation to what takes place in the healthy condition.

Undoubtedly the movement of the chyle is also favored by the peristaltic action of the intestines; for it may always be increased, in such experiments as I have detailed, by gently kneading the abdomen, and imitating, as nearly as possible, the natural action of these parts while digestion is in active progress.

There is still another very important question with regard to the lymph and chyle, and that is, the *total daily quantity* of these fluids.

In the earlier periods of physiological investigation, the quantity of the lymph and chyle was taken at an absurdly low estimate. For then, physiologists were not acquainted with the great rapidity and energy with which the process of endosmosis is accomplished in the living body; and in the second place, they were not in the habit of obtaining the animal fluids by direct experiment, and ascertaining their quantity by actual measurement.

As soon as this method was adopted, it was found that the daily quantity of the chyle and lymph far surpassed all previous expectation.

M. Colin, who has paid a great deal of attention to this part of the subject, has arrived at very remarkable results. In connection with M. Bérard, he measured the chyle discharged from the thoracic duct

of an ox during twenty-four hours, and found it to exceed *eighty pounds*. In other experiments of the same kind, he obtained still larger quantities. From two experiments on the horse, extending over a period of twelve hours each, he calculates the quantity of chyle and lymph in this animal as from twelve to fifteen thousand grains per hour, or between forty and fifty pounds per day. But in the ruminating animals, according to his observations, the quantity is considerably greater. In an ordinary-sized cow, the smallest quantity obtained in an experiment extending over a period of twelve hours, was a little over 9,000 grains in fifteen minutes; that is, five pounds an hour, or 120 pounds per day. In another experiment, with a young bull, he actually obtained a little over 100 pounds from a fistula of the thoracic duct, in twenty-four hours.

From the results which I have obtained in similar observations, I do not believe that these estimates are at all exaggerated.

In the experiments, for example, which I have already detailed to you, together with others of a similar nature, I have obtained from the thoracic duct the following quantities of chyle: 3¼ hours after feeding, 420 grains in an hour, in a dog weighing 24½ pounds; 7 hours after feeding, 430 grains in two hours, in a dog weighing 31 pounds; and 18½ hours after feeding, 425 grains in an hour, in a dog weighing 32 pounds. The average of all these results gives the total quantity of lymph and chyle in the dog during twenty-four hours, as very nearly 4½ per cent. of entire weight of the animal; and this proportion, in a horse weighing ten hundred weight, would be 45 pounds. This is substantially the same result as that obtained by Colin in his experiments.

In the experiment upon the kid, also, which I have detailed to you, you will remember that 1,890 grains of lymph and chyle were obtained in three hours and a half. This animal weighed only fourteen pounds. The above quantity, therefore, would represent 540 grains in one hour, and 12,960 grains, or 1.85 pounds, in twenty-four hours; and in a ruminating animal weighing 1,000 pounds, this would correspond to 132 pounds of lymph and chyle discharged by the thoracic duct in the course of the day.

We see, then, that this enormous quantity of animal fluid represents an exceedingly important part of the circulatory process. For the whole of it is absorbed from the various tissues, or from the products of digestion in the intestine, and, flowing inward toward the heart, is at once mingled with the venous blood, and thus forms an integral part of the circulating fluid. The function of the lymphatic system,

accordingly, increases very much the extent and activity of that great secondary circulation or interchange of the animal fluids, which we have already studied in part. For, in the human subject, supposing the quantity of chyle and lymph to be no larger than in the exclusively carnivorous animals, these fluids would amount to 4½ per cent. of the weight of the whole body; and for a man weighing 140 pounds, this would be equivalent to between 6 and 6½ pounds per day. Of this quantity, about 3 pounds consist of chyle, and about 3½ pounds of lymph.

We can appreciate the physiological activity, then, which is exercised in the phenomena of absorption and transudation, by uniting, in a single calculation, the whole amount of the fluids secreted and reabsorbed by the various organs and membranes in the course of twenty-four hours. In this table the quantities are all calculated for a man weighing 140 pounds.

Secreted and reabsorbed during 24 hours:

Saliva	20,164	grs. or		2.880	pounds.
Gastric juice	98,000	"	"	14.000	"
Bile	16,940	"	"	2.420	"
Pancreatic juice	13,020	"	"	1.860	"
Lymph	27,048	"	"	3.864	"
				25.024	

A little over twenty-five pounds, therefore, of animal fluids pass and repass through the tissues and organs every day. And this is in addition to the great movement of the circulating blood, which supplies the materials for all this transudation, and which, receiving back into its own current the substances which have passed through the animal membranes, again mingles their materials together, and reorganizes them into a nutritious and inexhaustible circulating fluid.

We have now, gentlemen, gone through with the different parts of the study of the circulation, and with this lecture the present course terminates. I am very well aware that we are far from having exhausted the subject, in the short time which we have now devoted to it together; but I have endeavored to present to you the most important of the phenomena connected with the circulation, and to exhibit, more particularly, the progress which our knowledge has made with regard to it, in the last few years. These advances, you will see, have not been made by the help of any ingenious speculation, but simply by the judicious and persevering employment of direct experimental observation. By a continued use of the same means, we may hope to enlarge still further the boundaries of our knowledge, and to

gain a still deeper insight into the most intricate and the most varied of all the animal functions. Finally, gentlemen, I must express to you my acknowledgments for the constancy with which you have attended these lectures, and the interest you have manifested in the topics which have been discussed; and in return, I can only hope that the gratification you have derived may have borne some proportion to the merits of the subject, and its importance in physiological science.

Seven Cases of Displacements of the Uterus Successfully Treated by a New Stem and Wing Pessary. By D. S. CONANT, M.D., New York, Prof. of Surgery in the University of Vermont, and of Anatomy and Physiology in the Medical School of Maine.

(Read before the N. Y. Medico-Chirurgical College, Nov. 15, 1860.)

In presenting the following instrument to the Society, I am aware that intra-uterine pessaries are ignored, and, indeed, considered dangerous by some who are making diseases of females the special object of their studies.

But this instrument has been so successful in my own practice, and the principle so successfully carried out by Prof. E. R. Peaslee, from whom I received first my suggestions, that I feel warranted in presenting it, with the following cases in which it has been used, to this Society.

The instrument consists of an intra-uterine stem and a vaginal body with two lateral wings, and is made entirely of hard rubber.

(FIG. 3.) (FIG. 1.) (FIG. 2.)

FIG. 1. Instrument as worn by the patient.
FIG. 2. Front view of Instrument as introduced.
FIG. 3. Side view of Instrument as introduced.

In order that the patient may derive the greatest amount of benefit from its use, the instrument must be adapted to the capacity of the vagina and depth of the uterus, the stem being less in length than the depth of the uterine cavity by about three lines. This point should be very carefully looked to, since, if the fundus rests upon the end of the instrument, the mucous membrane will become irritated and the patient suffer a great deal of unnecessary pain.

To avoid this, I have directed Tiemann & Co., the man-

ufacturers, to make four sizes, and in case a given stem is too long, it has only to be cut off and smoothly polished to make it suitable for the smaller organ, the depth being first ascertained by means of the sound, or a small catheter.

This instrument is intended to correct malpositions of the uterus, especially flexions and versions; but there are certain conditions of the organ which contra-indicate the use of any intra-uterine instrument, such as severe congestion, inflammation, or ulceration of the uterus itself, or of any of its appendages.

These pathological conditions must be removed before using any mechanical support within the vagina or uterus. If the disease depends upon the displacement, the instrument will be borne much earlier than under other circumstances, and the applications of ointment, &c., by means of the suppository tube, may be continued.

The first menstrual period will be prolonged and the flow considerably increased by the presence of the instrument, and it is necessary that the patient be judiciously managed during the time, absolute rest being enjoined for the first two or three days.

The same treatment may be required during the second and third menstrual periods. In introducing the instrument, it is necessary to ascertain if the os tincæ and os uteri are capacious enough to receive the stem; if not, they should be dilated first, by means of compressed sponge or the dilator; if this is not done, we may fail in our attempt at introduction; and even should we succeed, the patient will be likely to have considerable pain, while the cervix uteri is adapting itself to the size of the stem, which will be accomplished in from twenty-four to thirty-six hours. Again, the uterus should be placed in its proper position by means of the uterine sound, before we attempt to use the instrument, or we may fail to carry its point beyond the uterine bend. When the above indications are answered, the index finger of the left hand is carried in so as to feel the os tincæ, and with the other hand the point of the stem is carefully carried upon the palmar side of the finger already introduced until it reaches the os, when it is very readily guided by the point of the finger, so as to enter the cervix uteri.

Ordinarily, we would meet with no further obstruction until it reaches the axis of uterine mobility. If the malposition is anteflexion, the index finger is bent forward, and the fundus uteri pushed before it so as to straighten the canal. If the malposition is retroflexion, the point of the finger is carried back so as to reach the fundus uteri posterior to the cervix, and lift it up for the same purpose. When once the apex of the instrument has passed the point of flexure, we have

then no further trouble, but now attend to the wings of the instrument, which are pressing against the perineum of the patient; this is pressed firmly backward, so as to let the posterior extremity of the wings glide into the vagina upon its posterior walls. When this is accomplished the instrument slides easily up to its position; the wings are now opened by the index finger, and all the parts properly adjusted. After a few moments' rest the patient is allowed to sit up, when, if the instrument is of proper size and properly applied, the patient should have but little pain, and this ought gradually to diminish and entirely disappear in one or two days. If, on the contrary, the pain does not subside, and especially if it should increase, it is a pretty sure indication that there is some point of unnecessary irritation, and the instrument should be removed, and not again applied until this irritation has subsided; this I have been obliged to do only in one case, which was the case of a patient who came from Ohio, and was exceedingly anxious to return home early. The seat of irritation being exactly at the point of uterine flexure, the instrument seemed rather to increase than diminish it. The following cases will perhaps be sufficient to illustrate the utility of the instrument.

Case No. 1.—*Retroversion.*—In April, 1859, I was called to see Mrs. ———, aged about 35; residing in this city, when she gave me the following history of her illness: Since her last confinement, which was two years previous, she had suffered almost constantly from pain in the lower part of her back, and also from bearing-down or dragging pain in the anterior portion of the abdomen, palpitation of the heart, and general debility; but during the last two months all her symptoms had been aggravated. There was more or less difficulty in micturition, and considerable pain during the act of defecation.

Her menstrual flow had been regular, but profuse since she ceased to nurse her child, and for the five or six weeks preceding my visit, she had been flowing quite profusely all the time. I found her depressed in spirits, pale and haggard in her countenance, the mucous membrane of her lips almost as white as the skin, and so exceedingly weak, that she could hardly get up stairs without assistance. I directed her to use bitter tonics, iron, good food, &c., and an enema every night, of cold water and laudanum. This treatment was followed up for a few days with partial success, when I made an examination, and found that my patient was suffering from complete retroversion, which I corrected for the time, by means of Simpson's sound; but at my next visit I found that the organ had again become displaced; I again replaced it, and used a single ring pessary; this was partially successful only, and

after a few days' trial, finding no point of irritation within the uterus, I determined to use my intra-uterine instrument; this had the desired effect. The hæmorrhage ceased in forty-eight hours; and all the unpleasant symptoms, except the debility, entirely disappeared. The patient wore the instrument four months, and in the mean time recovered her health perfectly; her menstrual periods were regular and normal, except the first, which lasted five days, and was a little profuse. The instrument was removed at this time, as the patient felt so perfectly well that she thought she could do without it; but, at the end of five weeks, all her unpleasant symptoms began to reappear, and on the eleventh day of October, the same instrument was again replaced, when all the unpleasant symptoms again subsided. The patient now insisted upon wearing the instrument, which she has done up to October 29th, 1860, when it was removed, and found to be in perfect condition, after being worn one year and eighteen days; since its removal, the patient expresses great satisfaction to find herself so well.

Case No. 2.—*Anteflexion.*—In Sept. 1859, Mrs. ———, aged about 26, had one child, four years old, consulted me in regard to some uterine derangement from which she had been suffering for some time previous. Three years before, I had made one application to an ulcer upon the anterior lip of the os uteri, after which she was treated by her physician at home, which is about 100 miles from this city. Upon making an examination, I found well-marked ulceration upon the anterior lip of the os uteri and complete anteflexion of the organ. I made applications of the nitrate of silver at stated periods to the ulcer, and it very readily healed at each period. I also replaced the organ by means of the uterine sound. On the second of November I found the ulcer healed, and that the intra-uterine irritation had entirely subsided. I therefore used a pessary, which I had had manufactured for this patient; it gave her almost no pain after it was introduced, and the next day she left for her home in the country. Some two weeks after she returned, complaining of considerable pain in the left ovary and broad ligament; the instrument was readjusted without being removed, and the pain immediately ceased. The patient has now worn the instrument more than one full year, and has been completely relieved of all the unpleasant symptoms from which she previously suffered; she can walk or dance without unusual fatigue, and expresses herself as feeling as light as a feather. This patient returned Nov. 6th, 1860, saying that there had been no period since the instrument was last adjusted that she had been made aware of its presence. I found the instrument perfectly in place, and on removing it found

that it had undergone no change whatever, as the Society can see by examining the instrument. The uterus itself did not seem inclined to assume any abnormal position now that its support was removed.

Case No. 3.—*Anteflexion.*—Mrs. ———, aged about 36, having borne three children, consulted me in October, 1859, with symptoms of uterine displacement. I found decided anteflexion, with considerable irritation of the uterine mucous membrane; having removed this, I introduced the intra-uterine instrument about the middle of November; two weeks later she went home to Vermont, and has now worn the instrument more than one full year with the utmost comfort and relief.

Case. No. 4.—*Lateral Version.*—Mrs. F., aged about 40; married 20 years; without children; consulted me in June, 1856; upon examination, I found complete occlusion of the external os, with lateral version. I perforated the os tincæ, and, upon introducing the sound, found the internal os also nearly closed; after dilating this, my patient was so much relieved from her dysmenorrhœa, that she considered herself cured. In 1858, she again put herself under my care, with symptoms of uterine displacement, and I used various modifications of my instrument, which were worn with perfect comfort, and great relief, but the result was not so satisfactory as it had been in those cases where the displacement was anterior or posterior.

Case No. 5.—*Anteflexion.*—Mrs. ———, aged about 32; married five years without children; consulted me in March, 1856; suffering from complete anteflexion, with a fibrous tumor in the anterior wall of the uterus; she had become almost exsanguinated from menorrhagia. After replacing the uterus with the sound every day for nearly a month, I introduced the intra-uterine pessary, which the patient wore ten weeks. The menorrhagia entirely ceased, and my patient gained nine pounds the first four weeks that she wore the instrument. The tumor is now somewhat enlarged; so much so, as to prevent the organ from falling forward, and she has no hæmorrhage or other symptoms of uterine displacement.

Case No. 6.—*Anteversion.*—Mrs. ———, aged 22; married three months; suffering from great irritation in vagina and bladder; consulted me September 10th, 1859; upon examination, I found complete anteversion of the uterus. I replaced the organ and applied an ointment, astringent and narcotic in its character; the vaginal irritation very soon subsided, when I applied the intra-uterine instrumemt for the displaced organ; the patient experienced almost immediate relief from the vesical irritation, and from all other symptoms depending upon the

displaced organ. The patient wore the instrument about eight weeks; it was then removed, and in four or five weeks she returned, with many of her former symptoms of displacement. I then replaced the same instrument, which she wore for several months, with the same result.

Case No. 7.—*Retroversion.*—While at Burlington, or in the spring of 1859, I was called to a neighboring town in consultation. Mrs. ———, 20 years of age, had been suffering from retroversion, produced by jumping from a wagon some four years previously; she had dysmenorrhœa and menorrhagia to that extent that for the eighteen months previous she had been confined to her room and bed; the organ had already been replaced with the sound several times, and as I found no irritation, I immediately introduced one of the stem and wing pessaries; from this time the patient began to improve rapidly. She wore the instrument several months and regained her health almost perfectly, to the astonishment and delight of her husband and parents, and the utter chagrin of the physician who had attended her the previous four years.

I trust these seven cases are sufficient to report in full. I have, however, used this instrument in nine or ten other cases during the past three years; the instrument was worn, however, a less period of time than in the cases reported. I have seen no symptoms of a serious nature arise in any one case, but the almost universal testimony of my patients has been, that the only evidence they have of the presence of the instrument is the radical improvement in their general health, and the absence of all those distressing symptoms with which they had been so long tormented.

133 4TH AVENUE.

Ossification of the Humors of the Eye. By G. CECCARINI, M.D., New York.

(Read before the Medico-Chirurgical College, November 15, 1860.)

The pathological affection I am about to speak of, although not very rare, still deserves, I think, to be reported on account of the conditions under which it was present. The case was as follows: A young girl, 16 years old, born at New Hamburg, Dutchess County, N. Y., when two years old, fell down, having a pair of scissors in her hand, one of the blades of which entered the right eye, seriously wounding it. I do not know the extent of the lesion, or what portions of the eye were affected by the wound. All the information I

could get from her parents merely went to show that after the accident the eye became very red, very much inflamed, very painful; that this condition continued several months, and that when the inflammation subsided the eye had diminished in size.

These data led me to the opinion that the blade of the scissors, in penetrating the eye, had passed through the membranes and the humors *en masse*, and that the case was one of atrophy of the eye, the result of intense inflammation. I then saw the young patient, and the following was the result of my examination:

The eye was of an irregular form, flat from before, behind, and about half its normal size. The conjunctiva was healthy; the cornea opaque, flattened, and contracted; the sclerotica, diminished in volume, was hard to the touch; iris discolored; pupil obliterated. Pressure upon the eye by the finger caused much suffering. Exposure to cold air produced inflammation in the atrophied eye, which also affected the healthy eye.

The design of the parents in consulting me was to prepare the orbit for the application of an artificial eye. Under the conditions which I have just related, it was impossible for me to employ the usual process, and I therefore intimated to the parents the necessity of extracting the atrophied eye, in order to save the sight of the healthy organ, and I promised at the same time to perform the operation in such a manner that the application of an artificial eye would be easier, and without disturbance.

The 10th October last, assisted by my friends Drs. Meier and Lalane, I operated upon the young patient. After having placed her under the influence of chloroform, I performed the operation in the following manner:

The patient was lying upon her back, her head resting upon a firm pillow. I separated the eyelids with the elevators to their full extent, on account of the depression of the globe in the orbit. I then pierced the cornea through and through, a half line from the sclerotica, by means of a curved lance-shaped needle, furnished with a thread. Difficulties were encountered in this first movement, from the resistance of the cornea. When the thread had been drawn through the cornea, I twisted the ends together with my fingers, and waited a few moments before commencing the process necessary for the removal of the cornea, so as to permit the aqueous tumor to discharge itself slowly through the lips of the small incision made by the needle. At the end of a minute I passed the point of the staphylatome through the periphery of the cornea, and carried the blade of the instrument horizontally to the

opposite point; giving to the instrument a to-and-fro movement, I detached the cornea thoroughly.

Not a drop of the vitreous humor, nor of blood, escaped from the opening. A stylet introduced into the interior of the eye, in search of the crystalline lens, revealed to me the fact that the place of the fluids of the organ was occupied by a hard and round body. Trials made with forceps for extracting this morbid product failed. I then made an incision on each side of the sclerotica, of a line in length, a little above the direction of the rectus externus and internus muscles, and was enabled by these two little incisions to extract the pathological product. The hæmorrhage, which was very slight, was soon arrested by compresses of cold water.

Half an hour after the operation the young patient complained of a very severe pain about the orbit of the eye, which yielded to a few drops of Magendie's solution of morphine. The following days there was slight fever, and considerable swelling of the eyelids. Compresses of cold water, renewed from time to time, comprised the only local treatment, and the patient was put upon low diet.

The seventh day after the operation she no longer suffered, and I permitted her to rise, and remain sitting in her room. The ocular stump diminished with the progress of the cicatrization, and took on a spherical form perfectly fitted to receive the artificial eye, and give to it the different movements.

In speaking of this simple operation, it is not my intention to advance it as a new one. Far from that. My only idea has been to prove by the aid of another case, that we should hesitate to remove the entire eye in staphyloma of the iris, or of the cornea, and that the method of M. Bonnet, of Lyons, should be reserved for those cases in which the eye is affected with cancer, or other malignant disease.

The pathological specimen which I show you is, in my opinion, very important. It consists of an ossific deposit found upon the eye of a young girl, 16 years old. Examples of this affection are reported by Scarpa, Morgagni, Morand, Haller, Wardrop, Rognetta, Panizza, Desmarres, Pellier, and Cloquet. Not one of these physicians has observed the same morbid product in early life; all their examples which have been reported were found in patients who were over forty years old.

The most important point in this case is to ascertain in which tissue this ossification has taken place. The piece measures four lines in diameter, transversely, and three lines in depth, being about the size of a small cherry.

My own microscopic examination has not permitted me to decide which tissue was the point of departure for this product; whether the lens, or its capsule, the choroid coat, or the retina. In consulting different authors, I have not met an analogous case. Pellier is the only writer who reports a case which has any analogy to the piece I submit to you, and he says that the substance was the result of the ossification of the whole of the contents of the eye.

A New Cranial Perforator. [At the last meeting of the New York Academy of Medicine, a new Cranial Perforator was presented by T. Gaillard Thomas, M.D., Secretary of the Academy, with the following remarks.]

Since the period at which the operation of craniotomy was first established for the relief of dystocia, a large number of instruments have been invented for the performance of both its parts—perforation and extraction. In connection with those intended for the former, it is my intention to occupy for a few moments the attention of the Academy this evening.

In ancient times quite a variety of perforators were employed, into a lengthy history of which it will be altogether unprofitable to enter at the present moment. Avicenna employed instruments which, at the same time that they perforated, served as crotchets; and Mauriceau followed his example, the *tire-tête* of the latter being too well known to require more than a mention. Levret, Dionis, Fried, and others, made use of instruments which were guarded, and Sir Fielding Ould, at a still later period, invented one called the "Terebra Occulta," which consisted of a species of sheath containing a knife which could be projected at will. By some, a simple bistoury or ordinary surgical knife has been employed; by others, a plain spear of steel with a head like that of an arrow; while others preferred a species of scissors, the cutting edges of which were on their outer borders.

But as my intention is not to give a history of this instrument, I will pursue the subject no further. It will be sufficient, to give some idea of the great variety of perforators at various times introduced, to state that in the thesis of a young Frenchman, who wrote in the year 1832, sixty were mentioned. How many have since been added to the list we will not stop to inquire, but will at once proceed to those most recently invented and most commonly used at the present day.

Beyond all comparison, the perforator known as Smellie's scissors

is more commonly employed than any other. This instrument, too well known to require a description, has been modified in various ways. By Denman, the shoulders were altered and the inner edges of the blades made dull; by Naegle the joint was so changed that the blades could be separated by compressing the handles; by Davis, the entire shape of the instrument was altered, while the principle of action of Naegle's instrument was preserved, and many minor modifications have at various times been suggested by others.

The majority of physicians have never employed any other than one of these varieties.

Recently, M. Hyppolite Blot, of Paris, has invented an instrument acting upon precisely the same principle as the scissors of Smellie, but consisting of two discs of steel, shaped like arrow-heads, which being introduced, lying one on the other, are separated at will, and thus cut with the outer edges, which are sharp.

In Germany, a species of guarded trephine is, as I am informed by Dr. Noeggebath, commonly employed. Upon theoretical grounds, I should suppose that it would not act, but Dr. Noeggebath tells me that it is both speedy and facile of application.

Although Smellie's scissors answer the purpose for which they were intended, they are by no means perfect, and really it is surprising that they should have so long held precedence over all other varieties. I do not express surprise that they are preferred to all others now before the profession, for they are really as good as, or better than, any of their competitors; but it is astonishing that so many efforts should have left us so much to desire in an instrument of such importance to the obstetrician and his patients. It is with an earnest hope that some of the dangers and inconveniences attaching to them may be avoided, that I have been induced to bring forward a new instrument at this time.

The chief objections to Smellie's scissors are these:

1st. It is difficult to penetrate the bones of the skull when much ossified; sometimes, almost impossible.

2d. In forcing them against the round head, they are very apt to slip and cut the mother.

3d. The operator cannot open them himself, and has to trust this to an assistant, one of his hands holding one shank and the other guarding the points.

4th. As the outer edge of each blade is cutting, it is difficult to guard both at the same moment, and sometimes jerking rapidly through the tissues, the os is wounded.

The instrument which I now show (see cut) consists of a steel or iron tube, ten inches long, which ends in a screw, and hides within itself a cutting blade which is thrown out of its bed by the hand of the operator compressing the handles. Two inches from the extremity a shoulder is placed, which prevents its entering the head too far, and the blade is fixed upon its pivot by a slot, which renders its removal easy for cleansing the instrument. It is hoped that this instrument will possess these advantages:

1st. There is no difficulty of introduction, for the screw, being a double one, catches readily in the scalp and penetrates the skull with the same ease, and by the same force which would cause a gimlet to enter wood, or the screw of a ramrod to engage the wadding of a gun.

2d. It will not slip, for it is not pressed against the skull at all, but is wormed in by the process of boring.

3d. The operator himself throwing out the blade, he can regulate its progress and thus prevent its cutting the surrounding parts; an advantage, however, possessed by Naegle's instrument.

4th. There is only one cutting edge, and consequently, this is easily guarded, the attention of the operator not being distracted by one on the other side acting in a different direction. Two or three essays have convinced me that the instrument will penetrate the skull with great facility, certainty, and safety for the mother.

In presenting it to the Academy, I wish to be distinctly understood as in no wise entering a plea for a more frequent resort to craniotomy, an operation which must diminish in frequency of performance *pari passu* with the advance of the obstetric art. But if (as no one will deny) this sad operation must in some cases be done, it were better that it were well done.

Any instrument, from Smellie's scissors to an ordinary pocket-knife, will answer for its performance in the hands of an adept; it should, however, be remembered, that instruments should not be framed to suit adepts, but mal-adroit and inexperienced operators. Nor should they be constructed to aid in giving brilliancy to the operation of the

skillful surgeon; they should, as far as possible, protect the tyro from the misfortune of doing injury by reason of his incapacity or inexperience, and his patient from suffering at his hands.

So many trifling and insignificant modifications of the various instruments employed by the obstetric surgeon have been made of late years, that a prejudice against further change seems to have sprung up in the minds of many practitioners, who, when improvements are suggested, are inclined to quote such hackneyed phrases as these: "One instrument answers as well as another;" "an ordinary jack-knife will do as well as anything else;" "it is not the instrument, but the hand which uses it, which insures success;" and many others to the same effect. But what can be more thoroughly opposed to progress than such views? What can be more culpable than for those having human life in their keeping to frown upon advances in the implements, which not only they, but many who have just graduated, many who unfortunately are very ignorant, and many who have never before operated, have to employ; and this too in an age when the rifle and other implements of war, the machines used in agriculture and in housewifery, in fact all those employed in civilized life, are engaging the studious attention of thousands of ingenious mechanicians? No one will deny that the speculum of Sims, the forceps of Elliot, and the lever of Gardner are great improvements upon those employed twenty years ago; and all will admit that however skillful the hand, however capable the operation, the inconvenience, suffering and danger resulting from their use will be much less than if older instruments were still adhered to.

Finally, let me call attention to the fact, that although the steps of the operation of craniotomy are simple, its mortality is very great; according to Dr. Fleetwood Churchill, one in five mothers perishing, and of course all the children being sacrificed; surely whatever may diminish one tithe of this mortality is well worth the careful study of the medical profession.

Chlorate of Potash in Phthisis.—Notes of three Cases treated with Chlorate of Potash in the Buffalo General Hospital, by C. C. F. Gay, M.D., Attending Physician. Reported by J. A. Peters, Medical Student.

Much discussion having been elicited lately by Dr. Fountain's proposed treatment of pulmonary consumption with chlorate of potassa, the following notes of three cases, treated in the Buffalo General Hospital, are submitted, in the hope that they may be of some use in determining the value of the remedy. It may be objected by the friends of the treatment, and with truth, that the trial has not been sufficient to disprove its value; but the standing of any remedy is only fixed by the comparison of its effects in many cases, in the hands of different practitioners, and it is to assist in this comparison that these cases are reported.

Case I.—Thomas Kay, laborer, English, æt. 21, unmarried, habits intemperate, came in June 17th, has had a cough nearly two months. Symptoms indicate well-marked tuberculosis, emaciation great. The treatment adopted at first was the usual course of anodynes, cod-liver oil, and tonics, under which he continued in much the same condition until July 16th, when nausea and diarrhœa made their appearance; these were treated by appropriate remedies.

21st. Night-sweats. ℞.—Acid. sulph. arom., gtt. x., every night.

From this time, he continued improving until Aug. 1st, when all treatment was stopped, except a prescription which he had been taking for some days past to correct nausea. He continued much the same, his appetite being small, and diarrhœa, with some nausea, being present until September 6th, when his tongue presented a very bad appearance, being covered with white aphthous patches, and ragged at the edges. On the 8th of September all previous treatment was stopped, and potass. chlor. was ordered, ʒss. to be drank, dissolved in water, in 24 hours.

9th. Whiskey was resumed.

10th. Secretion of urine increased, much cough and expectoration of blood.

18th. Increased pot. chlor. to ʒvj., daily.

22d. Tongue better; edges still sore.

26th. Vomits potash; and on the 29th the potash was discontinued. During this time, his diarrhœa had been increased rather than diminished, and was immediately checked on stopping the potash. Nausea had continued, and seemed to have direct reference to the potash, since,

although that medicine was well borne at first, after two or three weeks of its use he could scarcely bear the sight of it.

CASE II.—John J. Cross, æt. 29, English, unmarried, formerly a butcher, but now an hostler, previous health good, taken five weeks since with chill and fever, followed by pain in side. In this case, the great emaciation and general appearance of the patient were such as to warrant the diagnosis of phthisis, which was further confirmed by physical exploration. Pulse 120 at the time, and has continued frequent ever since. He was ordered the following prescription on the 22d:

R.—Potass. chlor., . . . ℥ss.
Aquæ, ... Oj.
To be drank in 24 hours.

24th. Could not sleep; appetite better; cough and expectoration slight. 25th. Has diarrhœa; gin ordered.

26th. Cough worse; diarrhœa continues. 28th. Diarrhœa still present. Condition generally anæmic.

R.—Sulph. quininæ.

Oct. 3d. No better. Discontinued potash, which caused great nausea and loathing.

The diarrhœa in this case seemed to abate as soon as the pot. chlor. was stopped. This patient took the remedy well at first, and seemed to like it, but soon "loathed even the sight of it," as he said, and could not take it.

In the third case the remedy was ordered, the general symptoms seeming to warrant its use, although there were no strongly marked indications of tuberculosis. It is merely mentioned as illustrating the same effect which seemed to proceed, in the other cases, from the use of this remedy, viz., nausea and diarrhœa.

In neither of the above cases was any good effect perceptible; but on the contrary, the appetite was diminished, the diarrhœa and anæmia exacerbated, and nausea produced or increased. At first the patients were pleased to have a simple pleasant drink ordered, but this soon gave way to an intense disgust, and inability to swallow the medicine.

Whatever efficacy the remedy had in the hands of Dr. Fountain, it has served no good purpose, and its use has been abandoned, in this Hospital.

MONTHLY SUMMARY OF MEDICAL JOURNALISM.

By O. C. Gibbs, M.D., Frewsburg, N. Y.

Lead Poisoning from Water Conveyed in Lead Pipes.—In the *Boston Medical and Surgical Journal* for September 20th, Dr. J. R. Nichols has an article upon the above subject. It is true that water conveyed in some lead pipes seems harmless, and from others proves poisonous. Upon this point, Dr. Nichols observes, "I have noticed in the leaden pipes removed from cesspools, sinks, and wells, that the intensity of corrosive action had been in a great measure confined to the sharpest bends and depressions in the pipe, and in some instances, other portions remained intact." . . . "It is obvious, if these observations and conclusions are correct, that much care should be exercised in placing pipes in position, in buildings. In those leading to the culinary department, angles and depressions should be avoided. Violent twists and turns should not be permitted; and during the erection of houses, the open ends of protruding pipes should be carefully closed."

Whiskey in Tetanus.—In the *Louisville Medical News*, for September, 1860, Dr. A. B. Cook has an article upon the treatment of *tetanus*. He reports a case treated with whiskey, in which the results were perfectly satisfactory. The usual treatment was pursued for a time, with no improvement. Two ounces of whiskey were then ordered to be given every two hours, and the symptoms abated, and in due time the patient recovered.

Dr. Cook says, "From the evident good effects of the whiskey in this case, I would administer it with more hope of success than any other remedy with the result of which I am at present acquainted."

Treatmeat of Whooping-Cough.—In the *Louisville Medical News*, for September, J. W. Benson, M.D., has the following upon the treatment of whooping-cough: "Fifteen years have passed since we heard the justly distinguished Dr. Valentine Mott state that the following was the best palliative for whooping-cough which he had ever seen used, and fifteen years of experience induces us to say that it is the best which we have ever used; and with blisters to the nape of the neck, and the hypodermic injection of atropine, etc., before our eyes, we still adhere to it with undiminished confidence:

R.—Acid. Hydrocyan.,	. . .	gtt. vj.
Ext. Belladonnæ,	. . . .	grs. ij.
Tinc. Opii. Camph.,	. . . .	℥iij.
Syr. Bals. Tolu.,	. . . .	℥j.
Aq. Font.,	. . . . .	℥iij. Mix.

One tea-spoonful to be taken four times daily, and also in the nightly paroxysms."

In the August number of the *American Journal of Medical Sciences*, for 1839, Dr. Jackson, then of Northumberland, published a paper upon the use of belladonna in whooping-cough. In the same journal, for October, 1852, Dr. Hiram Corson has a paper upon the same subject. For several years past we have used belladonna in whooping-cough, and with results quite satisfactory. It is probable that the belladonna is the more efficient agent in the formula given above. It is our opinion that the efficacy of the mixture would be increased by enlarging the dose of this agent. A tea-spoonful of the mixture gives only

one-eighteenth of a grain of the extract of belladonna. To get the full benefit of the belladonna for a child one year old, the dose should be about one-eighth of a grain.

Cimicifuga in Rheumatism.—In the *Pacific Medical and Surgical Journal* for August, Dr. H. H. Toland has an article upon the complications of scarlatina, in which the following language occurs: "The tinct. accnite rad. was expected to allay pain, and control fever; besides, it is one of the most useful remedies known to the profession, *except* the *ext. of actea racemosa*, which exerts a more decided influence over every variety of rheumatic inflammation than any remedy I have ever administered, and will often disappoint even those who entertain the most favorable opinion of its efficacy."

We have been greatly pleased with the effects of the cimicifuga in rheumatic, as well as in catarrhal affections, and quote the above remark the more willingly because we believe the remedy is too much neglected.

Dislocation Treated by Wiring.—In the *Kansas City Medical and Surgical Review* for September, Prof. J. T. Hodgen reports a case of dislocation of the scapular end of the clavicle, which resisted every means for its retention in place, until wiring was resorted to, as is done in some cases of fractures. Twelve strands of fine iron wire were twisted together, forming a cord as large as a "*crow-quill.*" Holes were made in the acromion and clavicle, and the dislocated bones firmly wired together. No further trouble was experienced, and in twenty-five days the wire was removed.

Prof. Hodgen says, "I claim that in those dislocations of either extremity of the clavicle in which complete disruption of all the connections has occurred, and in which the bones are widely separated, the method adopted in the case reported is that which best answers the two important indications; *i. e.*, it keeps the parts accurately in proper position, and insures sufficient plastic exudation to unite them firmly, and thus insures good results in cases where failure would almost necessarily attend the ordinary methods of treatment."

Wood Naphtha in Diarrhœa.—In a paper by Dr. G. P. Hachenberg, in the *Cincinnati Medical and Surgical News* for September, the following remark is made in regard to treating diarrhœa: "After using for the last ten years *wood naphtha*, I am almost tempted to consider it the *ne plus ultra* remedy in infantile diarrhœa. I would just as soon be without quinine in treating intermittent fever, as to be without this medicine in treating diarrhœa. I have had many of my medical friends use it, and with the greatest satisfaction."

Though we have never used wood naphtha for diarrhœa, we have no doubt of its utility. In infantile diarrhœa we have never found anything to answer our purpose as well as *creosote*, rendered soluble by the addition of a little tinc. camphor, and given in some aromatic or astringent syrup. Wood naphtha resembles creosote, is composed of the same elements, with the difference that the relative proportions are slightly varied; both are obtained by the destructive distillation of wood, and if the wood naphtha is impure it contains more or less creosote. It is probable that *petroleum* might be found to have similar control over some forms of diarrhœa.

Electricity in Nervous Tremors.—At St. Vincent's Hospital, and under the charge of Dr. Wm. O'Meagher, (as per report in the *American Medical Times*, for October 27th,) a case of nervous tremor was successfully treated with electricity. The report says of the patient that "he was attacked with a universal

nervous tremor about four years previously, after having undergone considerable hardship and taken cold." The tremors were of such a character that, on sitting down, "he would make every article in the room vibrate in answer to his own involuntary movements." For four years he had been under treatment, without beneficial results. Dr. O'Meagher, despairing of the efficacy of drugs, had him electrified every other day. The improvement, under this treatmeut, was prompt and decided—the tremors gradually subsided, the bowels became regular, and sleep good—the appetite became good, and the patient improved in flesh and strength. The improvement was so rapid, that a disease of four years' standing yielded in two weeks, so that the patient went home rejoicing, with scarcely a vestige of his disease remaining.

Diphtheria.—Before the Cincinnati Academy of Medicine, the subject of diphtheria came up for discussion. (See *Cincinnati Medical and Surgical News.)* The *chlorate of potash* was a favorite remedy with most of those who had had experience with the disease. We quote one remark bearing upon prognosis. Dr. Murphy says, that "when there is an issuing of the plastic matter from the nostrils of the patient, the disease always terminates fatally!"

Premature Extraction of Deciduous Teeth.—In the country physicians are often compelled by necessity to do duty as dentists. This fact must be our apology for an occasional reference to dental subjects, for it is important that whatever we, as physicians, have to do, we do well. In the *Dental Cosmos* for September, Dr. J. D. White has an article upon the premature extraction of the deciduous teeth. It is a general impression among the people that the tooth of a child should be extracted as soon as it is in the least degree loose. This opinion is too often seconded by the dentist or physician, to the injury of the regularity and beauty of the permanent set. But we will let Dr. White, who is the more competent, speak for himself. "The object of the present article is to protest against a practice which we hoped had died out, especially among those who have been appointed to teach the science of our art. We allude especially to the *premature extraction of the deciduous teeth, to give the permanent lateral incisors room.* We never knew a case where such operation was necessary, nor do we believe it ever exists. The absorption of the deciduous canine root has seldom commenced at the period of eruption of the permanent lateral incisors, the difference between their periods of eruption being from three to four years. When a deciduous tooth is extracted the part ceases to grow, with the disadvantage, we believe, also, of *atrophia* of the part, as a consequence. But, apart from the contraction which takes place, and causes the permanent laterals to approach the anterior deciduous molars, they fall backward in the arch, so that when they have grown long enough to meet the lower teeth, they are inside of them."

Radical Cure of Hernia.—In the *American Medical Times* for August 25th, Dr. J. W. Riggs has an article on the radical cure of hernia. It is probably known to most of our readers that Dr. Riggs invented a new truss three years since, which, we believe, has found favor with the profession, and that about two years since, he invented a new instrument for the radical-cure treatment of hernia. Dr. Riggs' faith in success, from operative procedure, is shown by the following extract: "Though we shall make no attempt to demonstrate, as before stated, to *what extent* the cure of hernia by our method is practicable, we must, with due deference, assume that in a certain ratio yet undetermined, *it is curable* by the plan proposed; and we must, moreover, be al-

lowed the expression of convictions which are irresistible, that, with the necessary precautions, aided also by such facts as have been furnished by past experience, the per centage of radical cures *may*, and we believe, *must and will*, be so very largely increased as that the treatment advocated will commend itself to favor with the profession."

Dr. Riggs does not give in the paper before us the peculiarities of his method of treatment; they are stated in an article published more than two years since, which article has not fallen under our observation. The plan of operation first proposed by Wurtzer, is that most practiced by surgeons at present. Dr. Riggs thus states the advantages of his method over that of Wurtzer: "By the plan we advocate, the parts are simply pierced by the instrument, and the *inguinal canal alone* is subject to the action of the foreign body then introduced for a space of time varying ordinarily from one to two days, (though sometimes longer,) according to the circumstances of the case and the views of different operators. By Wurtzer's plan, it will be observed, the same parts are in like manner not only pierced, but the needle or stiletto is kept '*in situ*,' and the tegumentary as well as subjacent tissues, including a large portion of the scrotum, are clamped, and rigidly bound in a restrained and very uncomfortable position for several days, which cannot fail to aggravate the suffering of the patient, and if it do not also *increase* to some extent the danger of peritonitis, it certainly cannot diminish it."

Osteo-Sarcoma of the Lower Jaw, and Remarks in regard to Proper Operative Procedures for the same.—In the *Lancet and Observer* for October, Prof. G. C. Blackman reports a case of successful removal of a very large osteo-sarcomatous tumor of the lower jaw. The bone of the jaw was removed to the articulation on one side, and to the angle on the other. Bleeding was mainly controlled by the free application of the *persulphate of iron*. Prof. Blackman makes some practical remarks in regard to this case that are eminently deserving a place in our *Summary*. He says: "In the first place, ought not the surgeon, before attempting the removal of so large a tumor of the lower jaw, to ligate the primitive carotid artery? In support of this practice, as is well known, we have the high authority of Dr. Valentine Mott, whose name is so honorably associated with the early history of these operations for osteo-sarcoma."

Prof. Mott has reported three operations of this character, in which the primitive carotid was tied prior to the removal of the tumor, with but one death. Prof. Blackman regards this preliminary operation as unnecessary, and as one calculated rather to enhance the danger. Of his own experience he says, "Altogether, we have had *five* cases of disarticulation of the lower jaw, a number equal to that of any European, and exceeding that of any American surgeon mentioned in Velpeau's statistics, op. cit., p. 339, Vol. ii. In these, and in five others in which we have removed the body of the bone, we have never tied the carotid artery as a preliminary step. Our only fatal case is that where we removed the entire bone; and we believe the numerous physicians who witnessed that operation attributed, with myself, the death to the conjoined depressing influences of chloroform and intense heat, the thermometer ranging during the greater part of the day at 100° Fah."

Mr. Crisp, of London, has reported 21 cases in which the carotid was tied, of which 11 proved fatal. Dr. Norris, of Philadelphia, (see *American Journal of*

Medical Sciences, July, 1847,) has collected 149 cases of this operation, of which 32 were fatal. Supposing Dr. Norris' cases not to embrace those of Mr. Crisp, we have 170 cases and 43 deaths—a mortality a trifle greater than one in *four!* This mortality, following the operation of tying the carotid alone, is greater than that given by Prof. Blackman as following the removal of the jaw!

Prof. Blackman's figures differ a little from those we have given. He says, "Here, then, we have one death in four and seven-tenths cases, from an operation recommended to us by the very highest authority, as a *precautionary* step in the removal of tumors of the lower jaw. The mortality is about equal to that from the latter operation itself—one in four of one hundred and sixty cases collected by Velpeau." Prof. Blackman says he expects in a few days to operate on another very bad case of osteo-sarcoma of the jaw, and remarks, "We have no idea of applying a ligature to the primitive carotid; compression, persulphate of iron, and ligatures to divided vessels, are all the means which we expect to employ to guard against hæmorrhage."

A New Needle for Sutures.—In the *Nashville Journal of Medicine and Surgery*, for October, Dr. Paul F. Eve figures and describes a new suture needle. It is designed for the use of metallic ligatures, and, when armed, one end of the ligature projects near the point of the instrument. "It is slightly curved and has a lancet-like point and shoulders, to facilitate its passage through the soft parts," and is mounted on a fixed handle, thus giving the operator full control over it. "The novelty of its construction is the *canula* at the curvature through which the ligature, metallic or otherwise, is passed." Dr. Eve has three sizes made.

Vesico-Vaginal Fistula.—In the *Nashville Journal of Medicine and Surgery*, for October, Dr. W. T. Briggs reports a case of vesico-vaginal fistula of considerable size, which was cured by operative procedure. Two operations were necessary to effect a cure. He says, "After full consultation with Professors Eve, Bowling and Watson, I determined to leave the cervix uteri in the opening as it was, and to attempt to unite the vaginal with the uterine lip of the fistula, thus throwing the os uteri into the cavity of the bladder." After her recovery the patient menstruated entirely through the *bladder*. Dr. Briggs says, the greatest difficulty which he experienced in this, as in all similar operations, was in passing the sutures. He thinks this difficulty will now be entirely overcome by the use of the canulated needle, invented by Professor Eve, and alluded to above.

On the Influence of Menstruation and Pregnancy on the Quality of the Milk of the Human Female.—In the *Chicago Medical Examiner*, for October, Prof. N. S. Davis has an article upon the above subject. We give a conclusion or two, without quoting the facts from which those conclusions are deduced. Prof. Davis says, "From all the foregoing facts and analyses, I am led to infer that the occurrence of pregnancy during the ordinary period of lactation, either speedily reduces the quantity of milk secreted, or lessens the proportion of solid or nutritive constituents to such a degree as to render it insufficient for the proper nourishment of a child over six months old. In a small proportion of cases, however, the milk secreted continues abundant and of good quality, but the health of the mother rapidly declines; while in a still smaller proportion of cases, the mother and child both continue well nourished and healthy."

In regard to the composition of healthy human milk he says, "If we compare the results obtained by me with those just given, we may deduce the following table, which will probably afford as reliably a representation of the average composition of healthy human milk as can be obtained:

Water	885.50
Solid matter	114.50
Of which there is:	
Butter	29.70
Sugar and Extractive	43.35
Caseine	38.27
Salts	7.20

In regard to artificial food for young children, Prof. Davis says: "During the last three or four years I have regulated the food of infants coming under my care in accordance with the foregoing propositions, and with the most satisfactory results. The solidified milk, manufactured in Dutchess County, New York, contains just about the required amount of additional soda and sugar, and when dissolved in the right proportion of water, makes the best food that I have yet used for infants deprived of the mother's milk. I have now, within my circle of patients, three infants, growing finely on the solidified milk exclusively, and have been, since they were from three to six weeks old." In cities, we have no doubt this last suggestion is of the first importance. Practicing in the country, we have seen many children brought up by hand; and these same have flourished finely. For young children denied the breast, we have generally directed new cow's milk, reduced one-half with water; to this a little sweet cream has been added, and also a little pure sugar. All artificial food should be given from a bottle—"*suction being the only proper mode of feeding for a young child.*"

Ordinary city milk is entirely inadequate to the healthy nourishment of young children.

Stramonium in Neuralgia.—In the *Chicago Medical Examiner*, for October, Dr. A. Young has an article upon this subject. The author says of neuralgia: "I have to meet with the first instance that has failed to yield to stramonium." "The mode in which I have given it in the intermittent form, is gr. j. of Tilden's Ext. Stramon. Fol., every two or three hours during the intermission, until the system is decidedly affected, indicated by dilated pupil, disordered vision, vertigo, and often hallucinations, or mild delirium. When given to this extent, it will generally be found unnecessary to repeat it. Anything less than this will be of comparatively little value."

Opium in Inflammation.—In the *Chicago Medical Journal* for October, Dr. L. S. Ellis has an interesting paper upon the *nervous agency in inflammatory action.* We have not space for an analysis of his opinions in full, and will content ourselves with quoting a few remarks in regard to opium as an antiphlogistic. He says, "Opium stands as the *sine qua non* in the treatment of large and important classes of disease. It has been demonstrated beyond peradventure, by Dr. A. Clark, of New York, that opium alone is sufficient, if timely administered, to control the severest cases of puerperal peritonitis. General peritonitis yields equally surely to its influence. Inflammation of the pleura, in its incipient stage, more especially, yields to the magic influence of opium. I believe that it only wants a clear head and brave heart to show that

it would have a like influence, if timely administered, in inflammations of the meninges of the brain."

Veratrum Viride.—Before the *Lancaster City and County Medical Society* this agent came in for its share of attention. We quote from the *Reporter* for October 6th. Dr. John L. Atlee, Sen., spoke highly of it in *puerperal mania*, and concluded by saying, "that he was not aware that the veratrum had been used before in the treatment of puerperal mania; but he wished that his medical brethren would give it a trial, should they have the misfortune to encounter the disease. From its sedative influence upon the heart and nervous system, he thought it might be beneficially used in the treatment of some other forms of mania." Dr. Ziegler remarked that, "in his hands the veratrum viride had received a faithful and extended trial, and he was free to admit that, in the cases in which he had given it, it had proved beneficial beyond his most sanguine expectations. He gave the history of a case of typhoid fever, in which, after almost every conceivable remedy had been employed unavailingly, and the patient seemingly beyond the reach of medicine, Dr. Z. made use of Tilden's preparation of veratrum viride, and succeeded in restoring his patient to health." He also added that "in dysentery he had derived great benefit from its employment."

Dr. Parker remarked, that "on numerous occasions he had employed veratrum viride in puerperal fever, and with nearly uniform success. He acknowledged himself to be an enthusiastic advocate for its use in this disease; in fact, was almost disposed to regard it as a panacea."

Tannin as an Antidote to Strychnine and other Narcotic Poisons.—In the *Medical and Surgical Reporter* for October 6th, Dr. Patze has an article upon the antidotal powers of tannin in strychnine, as well as other vegetable poisonings. We have not space here to reproduce the article, but suffice it to say that Dr. Patze has used tannin in cases of poisoning with strychnine, stramonium, belladonna, &c., and with surprisingly happy results.

In-Growing Nail.—On a former occasion we refered to Dr. Gilman's treatment of this painful trouble. The treatment is by dropping a few drops of melted tallow, and made very hot, upon the diseased part. In the *Medical and Surgical Reporter* for October 13th, Dr. H. M. Clarkson reports a bad case of in-growing nail at once relieved, and soon cured by one application of this simple remedy.

A New Operation for Varicose Veins.—Dr. R. J. Levis, of the Philadelphia Hospital, has of late been treating, very successfully, varicose veins by an operation which, in a private letter to us, he says is *absolutely safe, and always successful*. The operation consists in a *subcutaneous ligation of the varicose veins with silver or iron wire*. The hospital reports, as published in the *Medical and Surgical Reporter*, for several months past, give a history of this operation and its results. With a straight needle the wire is passed beneath the vein, out through the skin on the other side, and returned between the vein and the integument through the original place of entry, thus surrounding the vein. Several ligatures are usually applied in each case, and at the same time. The ligation is made by traction on the wires, and by twisting them.

An Extraordinary Case of Ascites.—On a former occasion we referred to a case of ascites, reported by Dr. S. M. King, in which, in about five and a half years, over 628 gallons of fluid had been removed by tapping. The patient, Mrs. Adams, is still alive, and Dr. King, in the *Reporter* for October 13th, continues

the record of the case. In the last eleven months, she has been tapped eleven times, and had removed about 146 gallons of fluid, making, in the aggregate, over 774 gallons, or 24½ barrels. The patient's health is still tolerably good.

Neuralgia.—In the *Pennsylvania Hospital reports*, (as per *Reporter*, Oct. 13th.) Prof. J. F. Meigs mentions a case of *sciatica* that proved somewhat rebellious. The patient's sufferings were so severe that subcutaneous injections of morphine were frequently, and on several occasions, resorted to. Opium, valerian, iron, iodide of potassium, wine of colchicum, were resorted to in turn, with but little or no improvement. "Todd's anti-neuralgic mixture, which consists of 15 grains of bi-carbonate of potassa, 10 drops of tincture of opium, and 5 grains of nitrate of potassa," was next resorted to, with an occasional subcutaneous injection of morphine, under which the patient steadily improved.

We refer to this case for the purpose of mentioning a fact that we believe not to be sufficiently well-understood. In cases of a rheumatic or neuralgic character, of which sciatica is a type, we regard *strychnine* as the all-important remedy. In the last five years we have trusted all such cases to it, and it never has once disappointed us. We have generally commenced with one-twentieth of a grain dose, and increased slightly. Decided improvement will be manifested within a week. Where the paroxysms of pain are severe, as the action of the strychnine is not immediate over pain, opium by the mouth or by subcutaneous injection may be resorted to. The following mixture is a favorite one with us under these circumstances:

R.—Tinc. aconite,	℥j.	
Tinc. opium,	℥vij.	
Tinc. cimicifuga,	f. ℥j.	Mix.

Dose—a tea-spoonful. To be repeated as may be necessary to control the severe pain. In malarious regions quinine may be appropriately associated with the strychnine in mixture. We do that quite often even in non-malarial cases. Neuralgia is generally a disease of the enfeebled.

Diabetes.—In the *Maryland and Virginia Medical Journal*, for August, (which, by the by, has but just come to hand,) Prof. Samuel Chew has an able clinical lecture upon *diabetis mellitus*. We have given this a careful perusal, and regard it as an able and exhaustive essay upon the subject. Instead of indulging in crude and profitless speculations in regard to its nature, the author very frankly says of the primary pathological lesion, "No one knows where it is situated, or what is its nature."

Of treatment, he says, "The means which I have generally found more useful than any others, were proper regulation of the patient's diet, and the use of opiates and diaphoretics." An exclusive diet of animal food, Dover's powder and tonics of iron, he regards as the principal remedial agents. He says it is quite unfortunate that, though under this treatment the patient may improve quite satisfactorily, yet he soon longs for vegetable aliment and loathes his animal food. Under these circumstances, it is almost impossible to enforce the dietetic regulation. Prof. Chew does not allude to the *bran bread*, so highly spoken of by Dr. Camplin, of London, which may be used with the animal food, with less danger of getting up a disgust for the meat diet. Opium is evidently one of the most important agents in the treatment of diabetes, and Dr. Inman, of Liverpool, thinks it is borne in larger doses, and with better effect, when combined with quinine. Iodine, in full doses, has been suggested, and it is doubt-

less worthy a trial in so rebellious a disease. It may not be amiss to observe here that, at the *Hôtel Dieu*, Dr. Aran, who has acquired great celebrity in the treatment of this disease, prescribes for his patients daily the following:

"One ounce of bi-carbonate of soda, to be taken in the drinks; claret, 16 ounces; bark-wine, 3½ ounces; full diet of meat, equivalent to about 24 or 26 ounces of animal food; a vapor-bath, followed by cold affusions; spa-water at meals; four quarts of the usual diet drink."

Passage of a Large Stone by the Urethra.—In the *Maryland and Virginia Medical Journal* for September, Dr. W. M. Turner reports a case in which a child of two years of age passed, with a little aid, a stone of the following dimensions: "Length, five-eighths, and circumference, three-quarters of an inch; weight nearly forty-two grains." It is very unusual that a stone of these dimensions passes per urethra in a person of any age, and much less usual in a child so young. We once aided in the passage of a stone of just about the same size, in a young man of nineteen years.

Pneumonia.—In the *Maryland and Virginia Medical Journal* for October, Prof. F. Donaldson has an article upon the subject of pneumonia and inflammations in general. This is a subject upon which the most opposite opinions are held, and one in regard to which any additional evidence is of interest. Space will permit us to quote only a remark or two, but these will be sufficient to show what opinions the author holds. Bearing upon inflammation, he says: "We noticed a curious fact related by Bernard in one of his recent lectures. He accidentally left three dogs fasting together for three days; their nutrition failed, and each of them had an acute inflammation; one a pneumonia, another a peritonitis, and a third an enteritis." This fact is commended to those who regard inflammation as an evidence of an excess of vitality and vascularity, or sanguinity requiring blood-letting, antimony, &c.

In regard to treatment of pneumonia, he says: "As all cases of pneumonia now-a-days are of a low type, it follows, not only that we must not bleed, but must actually give quinine, which is a stimulant and tonic, (he might have added, under certain circumstances, sedative and diaphoretic,) to support the powers of life, so as to enable them to bear up against the depressing influence of the disease. Consistent, concomitant practice with this, is the administration of animal food in its most digestible form, such as beef-tea; but the digestion is weak, and even fluid animal broth has to undergo digestion. We want an article of food not requiring digestion and very assimilable, and we have it in the shape of alcohol. Todd, Lewes, Marcet, and our distinguished friend, Dr. Wm. A. Hammond, tell us it is food when given at regular intervals, in moderate doses; and we daily meet with poor drunkards who literally live on it. Its power of upholding and sustaining the vital forces, especially that connected with the nervous system, is wonderful; and, moreover, its hydro-carbonaceous nature gives it great heat-making properties, and thus the tissues, and with them the patient's strength, are sustained."

Tobacco, &c.—In the *North Carolina Medical Journal* for August, Dr. J. T. Schaffner has an article of thirty pages upon the use of tobacco. He stands opposed to its use, and concludes his paper thus: "In conclusion. I would say to those—and especially the young—not yet initiated into this habit, never begin. No good can possibly come from it; but, contrarily, as I have striven to prove, harm will. It will injure your health, your integrity, your morals, your

standing in society. You are now free; do not enslave yourselves. Let the habit alone—have nothing to do with it.

"To the moderate consumer, I would say, desist; stop where you are, entirely and forever: you cannot say one word in defence of it. Ask any intelligent consumer to give one valid reason for its use, and he will unhesitatingly confess he cannot do it. It does shorten life, makes you a slave to sensuous habits and appetites, debilitates and ruins you.

"To the habitual and confirmed consumer I appeal, though with little hope of effecting a reform. I know the struggle will be dreadful, but it is hard, because the vice takes away your will. Break asunder, *now*, the chains that bind you; better do it now than never! Happily for every one that tries; he has powerful allies to assist him. Against Tobacco are marshaled Woman; the Constitution of Man; the Voice of Nature; the Hopes of the Race."

In the *Nashville Journal of Medicine and Surgery* for October, Dr. Jerome Cochran has an article in defence of tobacco. He says the question is not whether tobacco in immoderation is injurious, for that is admitted; and the same admission may be made in regard to beef and bread; but "whether the characteristic action of tobacco in ordinary quantities, and under ordinary circumstances, is injurious to the human system?" We quote a passage as a sample of the whole argument, and must refer tobacco lovers and tobacco haters to the articles respectively. "It behooves us to inquire whether, since its (tobacco) discovery, its influence has been for good or evil; whether, since its consumption has become almost universal, the energy of the human race—physical, mental, moral—has suffered diminution; whether the progressive momentum of the nation has been checked; whether universal humanity has suffered any signal humiliation—any pariah degradation fairly traceable to its influence. Call the last three hundred years into the witness box and let them testify. Never before, sir, were the hands of man so busy—never before were man's achievements so brilliant. The last three hundred years—the world's tobacco period, have given us Shakspeare, Milton, Goethe, Bacon, Descartes, Newton, Hamilton, Comte; [the argument is defective, unless it be proven that these were eaters or users of tobacco!] the Inductive Philosophy, the Lutheran Reformation, the French Revolution, the American Republic, the steam-engine, the pile of Volta, the power loom, the electric telegraph. All this has been accomplished under the influence of tobacco; all this has been achieved since tobacco took possession of the world. How then is it possible to believe that tobacco is deleterious to the human race? How then is it possible to believe that tobacco weakens the bodies, paralyzes the intellects, and vitiates the morals of men and women? I tell you the accusation is not true. No sane man with all the facts before him can possibly believe it. Have all the people in the world conspired to tell a falsehood? There is an old maxim that the voice of the people is the voice of God. If this is so, is the united testimony of eight hundred millions of human beings to go for nothing? Is it reasonable to suppose, that in a world like this, six millions of acres of land would be devoted to the production of an article calculated to injure mankind physically, mentally, and morally? that two hundred and fifty millions of dollars are annually squandered in an indulgence that is worse than worthless? that sensible men and women would consume every year five thousand millions of pounds of unadulterated poison? The thing is incredible—an insult to mankind's common sense."

Being a non-user of tobacco, we regard Dr. Cochran's arguments as a little unsound. He thinks that "man's inherent appetites are a true and reliable guide to indicate to him what articles are best calculated to nourish and sustain his physical system!" Does he not know that man has no instinctive appetite for tobacco? The appetite is *entirely artificial*. The argument of Dr. Cochran would hold in favor of the use of alcohol, and the most besotted inebriate might find consolation in the fact that his instinctive appetites and natural cravings were in favor of his indulgences! We must be permitted to say that we regard Dr. Cochran's argument as unsound.

Air-Plug for the Speculum Uteri.—In the *Southern Medical and Surgical Journal*, for October, Prof. H. F. Campbell has an article upon the above subject. It is not always easy to introduce the common glass speculum, neither is its introduction always free from pain to the patient. Prof. Campbell proposes to overcome the difficulty, and to avoid the pain by the use of an air-plug. "This very simple apparatus consists of an elongated India-rubber bag, with a tube of the same material at its posterior end. This tube may be eight or ten inches in length; must have an air-tight stop-cock in the end. The bag is put into the speculum in a flaccid state, protruding a little beyond the uterine end—just enough to produce a somewhat wedge-shaped rotundity when fully blown up. At the point where the end of the speculum would form a ridge, there is a slight elevation or crimp on the bag; so that when the plug is blown up, the edge of the speculum is buried in the India-rubber, and completely protected from coming in contact with the delicate soft parts of the vulva or vagina. The bag, being properly adjusted in the speculum, is now fully distended with air from the mouth of the operator, and the stop-cock closed. The whole instrument is now lubricated with oil and introduced in the usual manner, when the stop-cock may be turned and the air allowed to escape. The bag of course becomes flaccid again, and can easily be removed by pulling on the tube, when the speculum may be adjusted, so as to bring into view the os uteri, and any other parts to be examined." . . . "Most of the glass speculums now in use are shaped *obliquely* at the uterine end; air-plugs made for these will, therefore, require that *crimp* near the fundus of the bag to be made to pass *obliquely* over it, corresponding with the direction of the edge. If the air-plug should come into general use, however, all glass speculums should hereafter be made *without* that obliquity at the uterine end."

Opium in Rheumatism.—In the *Atlanta Medical and Surgical Journal*, for October, Prof. J. G. Westmoreland has the following remark on the use of opium in acute rheumatism: "Opium, it is thought, interferes with the favorable action of quinine in rheumatism, and from my observation of a few cases in which the test was made, I am inclined to concur in the opinion. In cases, however, of great suffering, any counteracting influence that it may have, to the action of the quinine, is overbalanced by the comfort and sleep it insures." We quote the above for the purpose of making the following remark. We are confident that opium is better borne when combined with quinine, and that quinine is borne in full doses best when combined with opium.

Labor with Unruptured Hymen.—In the *Boston Medical and Surgical Journal*, for October 11th, Dr. C. E. Buckingham reports a case of a lady who was twice delivered of a full-grown child, without rupturing the hymen. Before the head of the child, it gradually merged into an extension of the vaginal

walls. Another circumstance worthy of remark in regard to this case during one of the periods of gestation, was the great power of the uterus to retain its contents. Because of uncontrollable vomiting, it was thought best to produce abortion. The uterine sound was passed four inches into the uterus and swept about, at two different times; at one time blood followed, and at the other a gill of water. A sponge-tent was introduced into the cervix uteri and repeated after its expulsion. In addition to these means, the patient took, in four days, "a pint of decoction made from an ounce of cotton-root bark, and four ounces of Tilden's fluid extract of the same drug." Notwithstanding all this, she carried her child for four months longer, and was delivered at full term of a full-grown and healthy child."

Intra-Uterine Dislocation of the Knee-Joint.—In the *Boston Medical and Surgical Journal*, for October 25th, Dr. J. Youmans reports a case of complete dislocation of the left knee, discoverable at birth. He supposes the dislocation to have been intra-uterine, and gives reasons for this opinion. So far as we know, this case is unique. We cannot well see how a knee-joint could be dislocated in the womb by any injury that would not prove extremely injurious to the mother. The fact that it *would not stay replaced*, but "flew back, as with a spring, to its former position," is presumptive evidence that the false position was taken, if not before ossification commenced, at least very early in that process.

White Poplar, or American Aspen.—In the *Journal of Materia Medica*, for October, Prof. C. A. Lee has an article upon the properties of the *populus tremuloides*. He says, "We have good reason for believing that its tonic properties are considerably superior to those of the salix, especially its antiperiodic power, and that there are few indigenous tonics superior to it in a certain class of cases, especially intermittents." . . . . . "It meets all the indications of the simple bitters." . . . "The resinous decoction of the buds of the *populus balsamifera* is collected in shells in Canada, and exported in considerable quantities to Europe, where it is in much repute as a diuretic and antiscorbutic. There is scarcely any doubt but that this substance will yet be found to be a useful substitute for the balsam of copaiba and the liquid turpentines. Further experiments, also, with *populin* in intermittents are desirable; we believe it will prove successful in a majority of cases, equal, if not superior to salicine, and can be manufactured much cheaper."

Prickly Ash.—In the *Journal of Materia Medica*, for October, Prof. C. A. Lee has an article upon the subject of *Xanthoxylum Fraxineum*. He says of it, "Though extensively used in domestic practice, in chronic rheumatism, &c., it has not been as much employed in regular practice as it deserves; for it is unquestionably one of our most actively medicinal plants, as its sensible properties very plainly indicate. As a powerful and permanent stimulant in languid, torpid conditions, especially in patients of a lymphatic, phlegmatic temperament, it deserves high eulogium; proving equal, if not superior to guiacum and megereum." . . . . "It seems to rouse the organic nervous agency in a marked degree, and in consequence, promotes the circulation throughout the whole capillary system; and this effect is not transient like that produced by the more diffusible stimulants, as alcohol and camphor." . . . . . "It is a powerful eliminant, exciting the whole secretory, excretory, glandular system, favoring metamorphic changes in the tissues, and acting as a general depurant.

Syphilitic sores and malignant ulcers speedily assume a more healthy aspect under its internal and external use. In conjunction with alkalies, it is also a useful article in chronic cutaneous diseases and atonic gout; salivation sometimes follows its long-continued use."

MONTHLY SUMMARY OF FOREIGN MEDICAL LITERATURE.

By Dr. L. Elsberg.

V.—SURGERY.

47. *Clinical Report on Rodent Ulcer.* By Jonathan Hutchinson. (Medical Times and Gazette, August 18 and 25; September 1, 8, 15, and 29, 1860.)

48. *On Shock in Military Warfare.* By John Brown, M.D. (Edinburgh Medical Journal, Sept., 1860.)

49. *Remarks on the Treatment of Tetanus.* In "Notes on the Surgery of the Indian Campaign of 1857–58." By John Brown, M.D., Assistant-Surgeon, Bengal Medical Service. (Edinburgh Medical Journal, Sept., 1860.)

50. *On Forcible Dilatation in Fissure of the Anus.* By M. Robert. (Journal de Médecine et de Chirurgie Pratiques, September, 1860.)

51. *On the Influence of Syphilis and its Mercurial Treatment upon Offspring.* By Prof. Faye, &c., &c. (Foreign Journals; *see* Schmidt's Jahrbücher, No. 7, p. 49, 1860.)

52. *Errors in Diagnosis of Constitutional Syphilis.* By Dr. Fr. W. Lorinser. (Wiener Med. Wochenschrift; Froriep's Notizen, I., No. 21, 1860.)

53. *On the Mercurial Nature of Tertiary Syphilis.* By Dr. Jos. Hermann. (Oesterreichische Zeitschrift für prakt. Heilkunde, No. 22, 1860.)

54. *The Treatment of Venereal.* By Dr. Jos. Hermann. ("Die Nachtheile der Mercurialkur." Vienna: Tendler & Co., 8vo; Froriep's Notizen, II., No. 24, 1860.)

55. *The Cataract or Cornea-Knife.* By Dr. H. Kuchler. (Deutsche Klinik, July 7, 1860.)

56. *The Scooping out of Cataract.* By Dr. Ad. Schuft. ("Die Auslöffelung des Staars, Berlin, 1860; Peters. 8vo, pp. 18.)

57. *On the Shortsight (?) of Squinters.* By J. Zachariah Laurence. (Glasgow Medical Journal, April, 1860.)

58. *Ether to Cure Deafness.* By Mlle. Cleret. (All recent French journals.)

59. *On the Division of the Ciliary Muscle in the Treatment of Glaucoma, as compared with Iridectomy.* By Henry Hancock. (London Lancet, Oct. 6, 1860.)

47. Of all the journals published in the English language, the *London Medical Times and Gazette* is the first, and so far the only one, that properly appreciates the present want of the profession in regard to reports of hospital practice, and that supplies that want in an entirely unexceptionable manner. [If we be thought to go a little out of our way to state this fact, our earnest de-

sire to have our own physicians similarly benefited must be our excuse, as to have in any manner contributed in bringing about such a result would be sufficient reward. We therefore respectfully direct attention, more especially the attention of the esteemed editors of our Weeklies, to the leading editorial of the *Times and Gazette's* issue for July 14th, 1860.] Mr. H., who presides over this department, has already presented valuable reports, which he has most recently followed up with a magnificent one on rodent ulcer, including a statistical analysis of forty-two cases. We quote his deductions, or, as the learned reporter himself calls them, "Aphorisms respecting the Rodent Ulcer."

(1.) That there occurs not infrequently on one or other part of the face, a form of ulceration, which is characterized by an indurated edge, and by a tendency to spread to adjacent structures, without regard to difference of tissue; which is very slow in its progress; does not cause much pain; does not induce cachexia, and is never followed by enlarged glands or deposits in the viscera. (*)

(2.) Sections of the indurated edge of this ulcer (or of the portions of new growth which are sometimes produced about it) do not exhibit the cell-structures met with in epithelial or scirrhous cancer, but only those of organizing fibrous tissue.

(3.) This ulcer differs from lupus exedens, in that it never occurs in the young, and never gets well spontaneously, while lupus exedens but rarely begins after the age of thirty, and usually tends after the lapse of time to cicatrize spontaneously. The two, also, further differ in, that lupus has a tuberculated, inflamed border, without any great degree of induration; while the edge of the ulcer in question presents an extremely indurated ridge, without tubercles, and comparatively free from inflammatory congestion.

(4.) The ulcer in question differs from cancer, in that there is but seldom present any tendency to the production of new material; that it never causes the glands to enlarge, nor induces morbid growths in the internal viscera.

(5.) Although it must be freely admitted that this disease is closely allied to cancer, and that, in its inveteracy under treatment, and its tendency, if not removed, to spread deeply and extensively, it well deserves the designation of "locally malignant," yet it is inconvenient in practice to call it "cancer of the skin," since there are other forms of cutaneous cancer, (the epithelial, scirrhous, melanotic, etc.,) essentially different from it, and of a far higher degree of malignancy.

(6.) The term, "a peculiar ulcer occurring in the eyelids," is too vague, and also involves an erroneous statement as to uniformity of location; an objection

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* In making this assertion, I am borne out by all the facts hitherto recorded. Fully acknowledging, however, the near relationship of rodent ulcer to cancer, I have but little doubt that it will now and then so far deviate from its usual course as to affect the glands, and quite anticipate in the future to hear of such a case. Epithelial cancer may be said to almost never affect the internal organs, yet a few cases are on record in which it has done so. Such exceptions, however, only prove the general rule; and just as the epithelial cancer very exceptionally affects the viscera, so will rodent very exceptionally affect the lymphatics. Professor Langenbeck has mentioned to me a case in which he excised a rodent ulcer from the side of a woman's nose, who afterwards remained well for nine years, and was then attacked by cancer of the uterus, followed by secondary growths and death. Such a fact is, however, very different from one in which the cancerous infection should advance, as in other malignant disease, through the lymphatic system, from the original ulcer.

which, also, in addition to what has been stated above, applies to "cancer of the eyelids," since this ulcer is met with on many other parts besides the palpebræ.

(7.) To the designation of Rodent Ulcer given to this disease by Lebert, and adopted in this country by Paget, (see Lectures on Surgical Pathology,) no objection applies, excepting that it is more vague than desirable. Of those in use it is certainly the best, and should the disease become generally recognized by the profession under that name, the vagueness of its meaning will, by custom, soon cease.

(8.) The Rodent Ulcer is most commonly met with between the ages of 50 and 60, and is equally frequent in the two sexes.

(9.) It occurs but very rarely on any other region than the integument of the face, and is most common in the eyelids.

(10.) It is a singular and very significant fact, that no case has yet been recorded in which the rodent ulcer attacked the lower lip, either primarily or by extension, while that part is well known to be a very frequent seat of epithelial cancer.

(11.) The *Diagnosis* of Rodent Ulcer is usually easy. An ulcer with a hard sinuous edge, situated on some part of the skin of the upper two-thirds of the face, of several, or, perhaps, many years' duration, almost painless, and occurring in a middle-aged or elderly person, of fair health, and without enlarged glands—such a sore is almost certain to be of the rodent type.

(12.) The *Prognosis* of Rodent Ulcer varies with the stage of the disease and the treatment it is intended to pursue. If left to itself it will slowly, but surely, advance both in extent and depth, and will probably destroy the patient's life in the course of from ten to twenty-five years, death being eventually produced by the exhaustion consequent on suppuration, hæmorrhages, pain, etc., and very probably aggravated by inability to take sufficient food, owing to the diseased state of the mouth. If the case be seen in an early stage, while complete removal either by knife or escharotics is practicable, a favorable opinion may be given as to the probable non-return of the disease. The younger the patient, the more rapid will be the course of the disease, and *vice versa;* and the younger the patient, the more nearly is the disease allied to cancer, and the more likely to recur after removal.

(13.) The only *Treatment* which the rodent ulcer admits of is local, and the best is that which obtains its freest removal with the least injury to the parts concerned. In some localities, and in some stages, escharotics, such as the chloride of zinc, may be advisable, but in most, excision and transplantation of skin is the more certain and satisfactory.

14. A widely-diffused knowledge of the true pathology of rodent ulcer may be expected to result in considerable advantage to the sufferers from that disease, since it will encourage to the early and free adoption of local measures, and to the employment of excision and transplantation, even in some cases which, if considered cancerous, would certainly be beyond relief by surgical art.

48. The following is quoted from the *Medical and Surgical History of the Crimea*, (Blue Book,) vol. ii., p. 256: "Shortly to recapitulate, the 'shock,' as usually coming under the cognizance of a military surgeon, is of a compound nature, in the composition of which the following elements may often be recognized:

1st. The vital effects following all severe injuries.

2d. The mechanical effects, probably many and various, of the peculiar velocity and momentum of the impinging force, especially in reference to common shot injuries.

3d. Probable additional vital effects of the above-mentioned velocity and momentum.

4th. Nervous depression, consequent on previous high nervous tension.

5th. Loss of blood to a considerable extent, sometimes by a large quantity, suddenly effused, sometimes by a longer process of gradual drain."

In conclusion, Dr. Brown states the following aphorisms:

1st. Shock in military warfare is a state which, except in cases of injury to vital organs, or severe hæmorrhage, does not supervene till some time after the injury.

2nd. In this case the knife should follow the wound if amputation be necessary, as less hæmorrhage occurs, and no additional shock is produced.

3rd. If shock be established, and show no sign of amendment, chloroform may be given, and amputation performed with the *chance* of success.

49. The able paper from which we have extracted both the preceding articles and the present, gained one of the gold medals awarded by the University of Edinburgh. Dr. Brown concludes that the frequent swallowing of medicines is a powerful excitant of the spasms; that little absorption goes on in the stomach; that frequent purging is a doubtful remedy, in view of the intimate connection between the intestines and the spinal cord, irritating substances in the former being by all admitted often to produce convulsive diseases; and that probably the most successful treatment would be by pulmonary inhalation of medicines. Although chloroform inhalation only alleviates the paroxysms of the disease, as I have seen in my own practice in Scotland, yet belladonna, cannabis indica, or opium might prove beneficial, if thus administered. If they did not, we might be sure of one thing—that their failure was not caused by deficient absorption, and we could thus estimate their value more clearly."

50. Sphincterotomy and every division of the fibres of the sphincter are entirely rejected, and unfailing success claimed for an operation, modified from Récamier's, which consists, after chloroforming the patient, in introducing the two index fingers in the anus, and forcibly drawing them apart, to dilate, but not to tear. This operation is very highly recommended as the most simple and humane; exposing to no danger; requiring no dressing; curing most certainly, rapidly, and without relapse.

51. Prof. Faye, of Christiania, has addressed a circular "to the physicians of all countries," in which he recommends attention to the following points:

How many children of syphilitic parents, treated with mercury, are born and remain healthy? how many die, or are successfully treated? Also, in how far is the assertion correct that a mother, who has borne syphilitic children, is subjected, when again pregnant, with the most happy effect upon the health of the child, to mercurial treatment?

Dr. F. urgently requests the brethren throughout the whole world, especially those engaged in private practice, to report their observations on these points. As soon as these are published, or sent to him direct, he will prepare and return the results.

Prof. Hebra publishes Faye's circular in the *Wiener Med. Vrochenschrift*, (11, 12, 1860,) and shows the benefits to science and humanity that will accrue from general compliance with Faye's wishes. After more definitely stating the

questions, he relates ten cases from private practice, in partial answer, from which cases he draws the following conclusions:

(1.) Secondary syphilis may be transferred per coitum upon the female without local affection on the genital organs of the male; and, therefore, still more easily when the remains of syphilis are present on the skin or mucous membrane.

(2.) Syphilis may be latent in the system; it may not be discoverable from any symptom, only be revealed by the syphilitic condition of the offspring.

(3.) On the contrary, also, syphilis may manifestly exist in the father, and yet (*a*) not be transferred upon the mother, nor upon the offspring; (*b*) even if transferred upon the mother, the child may be perfectly healthy; or (*c*) if even the first children are affected, healthy ones may be born afterwards.

(4.) While the usual treatment with mercurials does not insure against either recurrence in the same person or transmission upon offspring, there is no other method of treatment that does; and it must be at present admitted that syphilis can be cured in parents and children, with more certainty and safety with mercury than in any other way.

In presenting Prof. Faye's request to the profession of this country, we earnestly call upon them to report through the various journals all that has any bearing on the subject, as we have stated it in the heading of this article: whether both or only one, and which one, of the parents is syphilitic; the treatment employed in the cases of the parents and of the children; the cases, as far as ascertainable, of healthy children born from syphilitic parents, and especially mothers that underwent no treatment, should all be carefully recorded. We certainly trust that Hebra's fourth proposition may eventually be materially modified.

52. Lorinser submits that when writers on syphilis described the disease, its treatment with mercury had long been practiced already, and that, therefore, the so-called specific sequences of syphilis—induration of the chancre, syphilitic skin-diseases, ulcers of the mucous membrane of nose and throat, serpiginous ulcers, pain in bones and nodes, swellings of glands and iritis—could not, under these circumstances, be scientifically pronounced to bear any positive relation to the disease. He goes on to show that it is absolutely impossible, with the present confused knowledge on the subject, to diagnose secondary syphilis with any degree of certainty, and dwells on the necessity of scientific study of the disease with the absence of even the slightest mercurialism, requiring not only the non-administration of the drug, but the certainty of the absence of mercury from the system by chemical analysis in each individual case, including, when present, its entire removal from the body previous to any observations or treatment of syphilis.

53. The author regards all syphilitic affections of the bones entirely mercurial. He agues, 1. It cannot be proved that syphilis ever caused any disease of bone before the introduction of mercury; 2. There is not a single case known in which pure syphilis, *treated without mercury*, has caused osseous disease; 3. On the contrary, the whole series of so-called syphilitic diseases of the bones occur in laborers at Idria, who have never had syphilis; 4. The bone-diseases, formerly regarded as following Lues' gonorrhoica, have entirely disappeared since the mercurial treatment of gonorrhœa was given up; finally, the clinical observations made at the imperial hospital, Wieden, department for syphilis, have proved

that these supposed tertiary forms of syphilis always occur only after a previous introduction into the system of mercury, whether as medicine or otherwise; that they are curable with anti-mercurial treatment only, as by iodide of potassium, which renders the excretion of mercury with the urine demonstrable; and that post-mortem chemical examinations have indubitably proved the presence of mercury in the liver, kidneys and bones of persons that died of "bone syphilis."

54. Absolute exclusion of all mercurials, externally and internally; simple treatment of the primary forms; and employment of the iodide of potassium or of sodium in the cases in which chemical analysis proves the presence of mercury in the system; these are the main factors of my treatment, which, far from every secret remedy, is based on the combined experience of all physicians, down to the present day, with the unconditional exception of administering mercury.

Chancre frequently requires nothing but cleanliness and application of cold, without cautery; yet in many cases the latter is necessary to destroy the large amount of exudate, on which the induration of the chancre depends. Fungous granulations after chancre, as well as after all other forms, are touched with argent. nitrat. In some cases, rapid reparation and cure of chancre followed the sprinkling of very finely-powdered pumice-stone, starch, &c.

Buboes are treated in the beginning with cold, more frequently with tinct. iodine, sometimes vesicants, or also with compression by means of lead plates. In many cases, when too late for resorption, Vienna paste is employed. After suppuration is established, free incisions are made with the bistouri, canals enlarged, and if the bottom and edges of the wound assume a specific appearance, they are touched with lunar caustic besides.

Broad condylomata frequently disappear after the application of cold sitz-baths; in by far the majority of cases, however, they must be destroyed by argent. nitr. Pointed excrescences are removed with the scissors. Trials with the pulv. frond. sabin. junip. remained without noticeable success. Excoriations on the lips and in the mouth heal with cleanliness and cold water; those on the anus with cold sitz-baths, or occasionally not until glycerine is applied. Ulcers in the throat heal without recourse to caustics, by frequent use of a gargle either of alum, or aqua goulardi, or of a solution of iodide of potassium.

Exanthemata often disappear upon employing the cold douche for some time; sometimes they yield better to lukewarm baths; frequently, too, rubbing in of sulphur ointment, or of sapo viridis, is necessary. The pigment spots generally yielded to washes of a concentrated decoction of frond. sabin. juniperi.

Phimosis requires, according to circumstances, division, but in most cases circumcision of the prepuce. The double object of diagnosis and rapid cure overbalances in such cases the danger of possible infection of the wound with chancre-poison.

Paraphimosis requires reposition, often with incision, often with accompanying circumcision, of the prepuce, as in phimosis.

Gonorrhœa is treated in the first stage only with cold applications and cold bathing of the part; in the second, with injections of tannin or sulphate of zinc, with addition of simple anodyne tinct.: Orchitis exclusively with ice and iodine ointment.

An ointment of sapo virid. with chlorate of soda, followed by a bath, readily destroys and removes pediculi.

Against all the forms of so-called secondary and tertiary syphilis, as serpiginous cutaneous ulcerations, affections of bone, &c., iodide of potassium or of sodium is employed either in aqueous solution, or in pills, to the amount of 10 to 40 grains daily, given in two divided doses. This medication may be aided by daily sweating, for two hours or so, induced by packing in wet sheets and dry covers; according to circumstances, warm baths or cold douches may also be advisable.

The diet is but very seldom restricted to rigorous abstinence: best possible ventilation and cleanliness are never for a moment in any case neglected, and every patient is informed and warned in reference to the easy communicability of the syphilitic poison.

I am perfectly convinced that remedies may in the future be found better than those mentioned for the different forms. I am quite willing to examine any proposed improvement in treatment, and, if it can be done without disadvantage to the patient, practically to try it; but I will never employ anything that is either *à priori*, known to be injurious, or that has not a sufficient and reasonable claim for trial. Without. therefore, opposing new remedies, there are two methods at present in vogue that I shall never inflict on any patient of mine, viz.: 1, syphilization; and 2, the method of inunction recommended by Prof. Sigmund.

55. After speaking of the disproportion between the wound or flap made, and the length and breadth of cutting edge of Beer's and all other knives used in extraction, in cases of cataract, Küchler recommends a knife, better adapted to its object, having a cutting edge six lines long, (he occasionally uses one of eight lines,) and greatest breadth of blade two lines, (six millimeters,) fine point, very slightly convex, sharp edge, blunt, thin back, with the usual five-inch-long handle.

56. The author describes a new operation for cataract, for which he claims superior advantages. It requires for its performance a series of scoops or spoons, which he minutely describes with so carefully executed illustrations that any instrument-maker can doubtless manufacture them thereafter. [Less detailed and unillustrated description on our part would be useless, and the translation of the whole pamphlet inadmissible in this *Summary*. We will with pleasure, however, furnish the drawings and explanations to any one interested.]

57. Laurence insists on the fact that squinting is more than the mere personal disfigurement. "Suppose," says he, "a case of marked convergent squint, affecting primarily the right eye. On directing the patient to close the left eye, and look straight forward with the right one, an accurate examination will show this latter to be more or less *myopic*, but generally remediable by the use of a *convex* lens." To explain this remarkable phenomenon, he advances the opinion that "whilst this paradoxical form of myopia is really due to a lateral compression of the globe between the external and internal recti, the cornea not only becomes more convex than natural, but the whole globe becomes at the same time elongated; the consequence being a myopic condition of the eye of a very complex character, such as will require still further research for its satisfactory elucidation."

He concludes by remarking that, in his opinion, "(with certain exceptions) *all cases of squint should be operated on as early as possible*, lest the defect of vision attending the personal disfigurement be rendered so inveterate as to

baffle the resources of surgery—a result the more likely to accrue from an injudicious use of glasses, goggles, and other artificial appliances of the kind."

58. [The latest French sensation is the cure of deafness by introducing some drops of ether—variously stated from 2 or 3 to 20 or 30—into the ear. Extraordinary cures have, of course, occurred, unnecessary to be detailed here. The ether probably only acts as an irritant, and may in many cases do much harm. If proved sufficiently important, we shall refer to it again.]

59. Mr. Hancock's operation is based on the view that the pathological ophthalmoscopic appearances of the blood-vessels in glaucoma are due mainly to the constriction exercised by the ciliary muscle; and is performed as follows: Introduce a Beer's cataract knife at the outer and lower margin of the cornea, where it joins the sclerotica. The point of the knife is pushed obliquely backward and downward until the fibres of the sclerotica are divided obliquely for rather more than $\frac{1}{3}$ of an inch. By this incision the ciliary muscle is divided.

VI.—GYNECOLOGY AND PÆDIATRICS.

60. *Urticaria from Irritation of the Sexual Organs.* By F. W. VON SCANZONI. (Würzb. Med. Zeitschrft, I., p. 92.)

61. *Cases of Spontaneous Cure of Uterine Polypi.* By M. VELPEAU. (Gazette des Hôpitaux, 33.)

62. *On Fibrous Polypi of the Uterus.* By C. HABIT. (Wiener Zeitsch., III., 12.)

63. *The Congenital and Acquired Diseases of the Lips in Infants.* By Dr. J. B. JACOBI, of Berlin. (Journal für Kinderkrankheiten, XXIV., p. 41.)

64. *On the Prophylactic Treatment in Croupy Diathesis of Children.* By Dr. TH. CLEMENS. (Journal für Kinderkr., XXIV., p. 180.)

65. *On the Pathological Significance of Jaundice in the Newly-Born.* By Dr. A. BRUNNICHE, Physician to the Children's Hospital of Copenhagen. (Journal für Kinderkr., XXIV., p. 193.)

66. *Weissbrod's Pelvimeter.* By A. MERCER ADAM, M.D. (Notes on the Hospitals of Munich, Edinburgh Medical Journal, July, 1860.)

67. *Anatomical Character of Peyer's Glands in Infantile Typhoid.* By Dr. JOS. BIERBAUM. (Der Typhus im Kindlichen Alter, Leipzig, Chr. E. Kollmann, 8vo; Froriep's Notizen, II., No. 23.)

60. The author, in illustration of the influence of the genital organs on the cutaneous system, relates four cases in which leeching of the os uteri induced a more or less extensive eruption of urticaria. His lengthy explanation amounts to this, that he supposes the irritation of the uterine nerves from the leech bites caused an unusual, and as to its exact causation, inexplicable excitement of the circulation; which again, for as inexplicable a reason, produced the acute eruption.

61. In view of several such cases observed in his clinique, Velpeau advises never to hasten an operation, unless very serious flooding, or other dangers to life, render it imperative. The spontaneous cure occurs either by suppurating or by drying and shrinking, and sometimes in a very short time. The polypi more frequently than they entirely disappear, remain in a certain stage of their development, gradually ceasing to cause loss of blood, and occasioning only slight inconvenience.

62. The author reports twenty-one cases. Most of them occurred relatively

late in life, especially about the change. Among the twenty-one there were three virgins; with the exception of these, and three others, all the sufferers had borne children. In most of the cases, the polypi was attached to the posterior wall of the uterine cavity—only five times to the cervix. In size, the polypi varies from that of a hazel-nut to that of a child's head.

The diagnosis was generally easily made out on a vaginal examination.

In fourteen cases, in which the body of the polypus had either almost or entirely left the uterus, the enlarged womb could be felt by external examination, while the internal revealed the foreign body. When the polypus is entirely intra-uterine—which it was four times in the twenty-one—the diagnosis is of course more difficult. Enlargement of the organ—menorrhagia, metrorrhagia, blennorrhagia, and "labor-like" pains—give rise to suspicion, but no certainty. In these cases, mechanical dilatation, by means of the pressed sponge, often leads to certain diagnosis.

Of the twenty-one cases, fourteen were operated, three refused to be, three died before, and in one case the stalk was so thick that the author dared not operate. The operation consisted, eleven times, in excision, (ten times with scissors, and once with *Mikschik's* thimble instrument,) once in torsion, and twice in ligation. Of the patients operated by excision, six were cured, and five died with symptoms of pyæmia. The case in which torsion was practiced was cured. In two cases ligation was successful, in the other two it failed.

To ecrasement and galvano-caustic removal, the author accords no particular advantage, though he has never employed either of these methods.

Everything else that Dr. H. advances is well known.

63. Besides the well-known *hare-lip*, there may be:

(1.) *Too short upper lip.* The author here only confirms the well-known observations of Louis.

(2.) *Mucous Tumors.* This occurs on the inner surface of the *under* lip especially. Mucous tumors are either (*a*) hypertrophy of the mucous follicles; (*b*) thickening of the mucous membrane, and the connective tissue under it; or (*c*) polypoid excrescences. Under ordinary circumstances, the author would not extirpate them until after the second dentition.

(3.) *Hypertrophy of the lips.* This is not very rare, and is usually of a scrofulous nature. Purging and anti-scrofulous treatment is indicated, and if unsuccessful, operation after Paillard with chloroform.

(4.) *Occlusion.* Although Boyer speaks of congenital atresia of the mouth, there is no such case recorded in modern literature. The author never found this imperforate condition except as a pathological process, after burns, &c.

64. The author regards the use of cod-liver oil, continued for some time, a most certain, safe and useful prophylactic to attacks of croup.

65. The author thoroughly reviews all the various circumstances under which yellow discoloration of the tegumentary system can occur in infants. The article is full of suggestive and practical observations. Speaking of icterus accompanying phlebitis umbilicalis, a very dangerous disease, he very properly urges the necesity of examining the condition of the umbilical vessels in every case of infantile jaundice.

66. A peculiar pelvimeter is used in the *Gebär Anstalt*, or Lying-in Hospital, of Munich. It consists of the forefinger of an india-rubber glove, having at-

tached to its point a tape, graduated on one side, and having on the other raised dots corresponding to the markings, thus enabling the operator to ascertain measurement by touch. In using it, the index finger of the right hand, armed with this glovelet, is passed per vaginam to the promontory of the sacrum, and the tape is stretched by another finger to the symphysis pubis, by which means the antero-posterior diameter of the pelvis is readily obtained. By changing the direction of the finger, the other diameters are ascertained. This little instrument is exceedingly simple, and is certainly a deal more useful in practice than many of the formidable-looking pelvimeters of other obstetricians.

67. "Comparing the lesion of Peyer's glands as found in the child with that occurring in the adult, we notice some remarkable peculiarities.

(1.) In children, the raised patches are of a soft consistence, especially when death occurs early, while in adults they show a hard, elastic resistance. In the latter, the typhoid infiltration destroys the follicles, their interspaces and walls, as well as the covering mucous membrane, and ulceration and scab formation must ensue; while in the former, the mucous membrane is only adherent or softened. From this difference it is clear why the disease is less dangerous in children than in adults. On what this difference of anatomical lesion depends is as yet unknown. It is surely not accidental, and may perhaps become understood on thorough investigation into the peculiar structure of the glands during childhood.

(2.) While the submucous tissue is always diseased in the adult, it is, according to Barther and Rilliet, in the child, neither injected nor softened, but almost always perfectly healthy. Friedleben declares, however, to have found this submucous connective tissue in a state of softening in children as well as in adults, so that further exact observations are wanted to settle this point.

(3.) According to Friedleben, the typhoid infiltration is more incomplete in children than in adults.

(4.) In children, the inflammation of Peyer's and the solitary glands usually terminates by resolution. This is probably principally due to the superficial character of the inflammation, the deeper tissues remaining in the healthy state. Ulcerated patches, so extremely frequent in adults, but seldom occur here; and this fact of the resolution of inflammation of Peyer's glands in children explains why neither ulcers nor cicatrices are found after death, although the symptoms during life left no doubt as to the actual existence of typhoid fever. The rare occurrence of ulceration yields also a satisfactory explanation of the rarity of hæmorrhage and perforation of the bowels in children."

Having translated the above extract, which speaks for itself, we take pleasure in recommending the entire monograph of Dr. Bierbaum as the best treatise on typhoid or enteric fever, as it occurs in the age of childhood, extant.

REVIEWS AND BIBLIOGRAPHY.

Clinical Lectures on the Principles and Practice of Medicine. By JOHN HUGHES BENNETT, M.D., F.R.S.E., &c., &c. From the last Edinburgh Edition, with 500 illustrations on wood. New York: S. S. & W. Wood. 1860.

The present edition of this work is a reprint from the third Edinburgh edition, and contains the latest additions and revisions of its author. Upon a first view, the reader would be struck with the neat typographical execution of the volume, and the number and excellence of the cuts. This is no small merit in any book; for the dress of a good book, if it does not enhance its value, certainly does make it more attractive, and a poor book meets a readier sale from an inviting appearance.

There is no question as to the value of the work before us. The rapid sale of two editions, and the copious additions made to the third, prove that it has met the wants of the medical student. If we seek the cause of this popularity, it will be found that the plan of the work supplies the necessities of a large class of practitioners. Founded upon pure science, the principles of medicine are formularized upon the present position of physiology and pathology, and clinical medicine is brought in to illustrate, by its practical demonstration, the theoretical views advanced. Theory is not discarded by the author, for every advance in the art of medicine has been owing to the result of scientific investigation, and he believes with Cullen, that "the truly judicious practitioners and good observers are such as have the most extensive views of the animal economy, and know best the true account of the present state of theory, and therefore, know best where to stop in the application of it."

Entering upon his work with this spirit, and testing each theory by the touchstone of experience, guided by the light of science, it is not astonishing that we should find long-established views doubted, accepted theories controverted, and new theories proposed.

The plan of the work is different from any treatise on the practice of medicine which has ever issued from the press. It is divided into ten sections, as follows: Section 1st, Examination of the patient. The method of examination is that known as Rostan's, by which many interrogatories are avoided, and the condition of the patient is arrived at in the most direct manner. This section points out the different symptoms to be investigated, and explains the method to be pursued by auscultation, percussion, by the microscope, and by chemical tests.

Numerous cuts illustrate the text, and aid the student in pursuing his own researches. In addition to this, how to conduct, and what to observe at, a post-mortem examination, is given in detail.

Section 2d is devoted to the discussion of the principles of medicine, and it is in this section that the varied scholarship of the author is shown by his clear *exposé* of the present status of physiology and pathology. The result of the recent advances in morbid anatomy, pathology and clinical observation has been, says the author, "a complete overthrow of nosological systems. We now attempt to trace all maladies to their organic cause; and just in proportion as this has been successfully accomplished, has medicine become less empirical and more exact."

The author divides all diseases into two great classes: 1, Diseases of nutrition; and 2, Diseases of innervation.

The different steps by which the nutritive process is impaired and the blood diseased are then passed in review, and the forms of disease arising from any derangement in the circle of the function of nutrition demonstrated, and from this the general principle is laid down, "that diseases of nutrition and of the blood are to be combated by an endeavor to restore the deranged processes to their healthy state in the order in which they were impaired; that a knowledge of the process of nutrition is a preliminary step to the proper treatment of these affections; that the theory of acting directly on the blood is incorrect; and that an expectant system is as bad as a purely empirical one."

The function of innervation is, in its turn, examined, and the general anatomy, physiology and pathology of the nervous system briefly explained.

Exudations are then treated of; the three varieties, simple, cancerous, and tubercular, separately considered, as comprising the greater part of organic diseases as distinguished from functional diseases; of lesions of nutrition, as separated from lesions of innervation.

This Section also considers the morbid growths of texture—their general pathology and treatment—the morbid degenerations of texture, and concretions. This part of the work is profusely illustrated with microscopic drawings, taken from different sources, as well as original with the author. These two sections constitute a fair *résumé* of the histological and pathological science of the present day, which leads to a more correct diagnosis and a purer therapeutics.

By these gradations, the author is led to speak of the changes which have arisen in the treatment of disease as the consequent of the advancement in our knowledge of diagnosis and pathology. This con-

stitutes the subject of the next, Third Section, and in this is given his paper on the Diminished Employment of Bloodletting and other antiphlogistic remedies in the treatment of inflammations, which was the subject of so much controversy in Great Britain during the years 1857–58.

As an appendix to this paper, are added the views of other distinguished medical writers and teachers of Great Britain, elicited at the time, by the novel position taken by Prof. Bennett. This Section is a most instructive chapter in the history of medical controversies, and in our minds, fully sustains the opinion we once heard the author express, that a great revolution was about to take place in the treatment of diseases; that old theories would be abolished, and a new school of medicine would arise, based upon our more thorough knowledge of the laws of life, and our better understanding of those phenomena which are produced by a disturbed organism, and known as disease.

The remainder of the volume is mostly occupied with the consideration of special diseases, as they occur in the nervous, the digestive, the circulatory, the respiratory, the genito-urinary, or the tegumentary system. These Sections are clinical lectures, with reports of cases as they presented themselves to the author during his period of service at the Royal Infirmary of Edinburgh, and reported by clinical clerks appointed for the purpose. The report of each case or class of cases is followed by a commentary, in which the author explains the marked symptoms in the case, as illustrated by the pathological appearances, when death occured.

The last, Tenth Section, is devoted to the discussion of Diseases of the Blood; and here, the same plan of clinical illustration is carried out.

This slight analysis of the excellent volume before us is all that our space will admit; yet this alone will show to both practitioner and the medical student just entered upon his career, the great value of the instruction found in it. To the one, it cannot fail to be other than a much consulted companion, and to the other a most reliable guide. For the young student, we do not know a work on practice we should recommend so highly as this of Dr. Bennett.

The Physician's Visiting List, Diary, and Book of Engagements for 1861. Philadelphia: Lindsay & Blakiston, 25 South Sixth Street, above Chestnut.

The Physician's Hand-Book of Practice, for 1861. By WILLIAM ELMER, M.D. New York: W. A. Townsend & Co., 46 Walker St.

Records of Daily Practice. A Scientific Visiting List for Physicians and Surgeons. New York: Baillière Brothers, 440 Broadway.

Visiting Lists have become as much a distinguishing necessity of our days, as the gold-headed cane was in the times gone by, when

> "Each son of Sol, to make him look more big,
> Had on a large, grave, decent, three-tail'd wig;"

and verily, to observant philosophy, the relative use of the cane and the memorandum-book marks the difference between the physician of now and of then.

We have placed the three little books to be reviewed in the order of time in which they were for the first time placed before the profession, and of patronage they receive. We do not wish to be understood to have arranged them in the order of their merit, because each has merits peculiar to itself; especially should we be unfair to the "*Records of Daily Practice*," did we make the impression upon the reader that it is least deserving, because here last on the list. Its special aim is to remedy an evil long felt and complained of. Lord Bacon, in speaking of the deficiencies of physicians, says, (Advancement of Learning, Book II., Narrationes Medicinales): "The first is the discontinuance of the ancient and serious diligence of Hippocrates, which used to set down a narrative of the special cases of his patients, and how they proceeded, and how they were judged by recovery or death." Such narratives, carefully arranged, not only prove of inestimable value to the practitioner himself, but they forward the progress of the healing art, and especially tend to increase our knowledge of diagnosis and therapeutics.* To facilitate, and thereby induce the profession to *make* systematic records of such statistical narratives, to meet both the wants of science and those of the practitioner, (when it is known how little attention—either from actual want of time or from neglect—the vast majority of physicians bestow upon ever taking notes of even their most important cases,) is certainly a most commendable endeavor, and a most difficult task to perform. Such is the object of *Baillière's* publication. Having ourself experi-

* Tanner's Clinical Medicine. Philadelphia, 1856, p. 32.

enced the difficulties of a similar attempt, we can keenly appreciate the author's labor. He has succeeded in presenting an admirable and satisfactory little book. We have not yet mentioned—what, indeed, we don't learn until after having read the Preface—that the author is A. N. Bell, M.D., member of the Kings County Medical Society, one of the physicians to the Brooklyn City Hospital, etc. To give the reader an idea of the arrangement, we must state that every two opposite pages may be considered as forming one folio. The upper third of the left-hand page has the four headings: Designation of the individual; Hygienic influences; Hereditary influences; Previous diseases—placed one under the other, with one intervening line, without ruled spaces. The right-hand page, the two headings—Habitual state of the functions, and History of the present disease. The lower two-thirds of both pages across, contain, under the heading, Present state of the patient, seven spaces, separated by vertical lines, with the sub-headings: Date, Obvious conditions, Digestive system, Secretions, Circulating system, Respiratory system, and Treatment. From the Preface we learn what the author wishes to be recorded under each heading:

"*Designation of Individual.*—Name, Age, Birth-place, Size, Form, Muscularity, Temperament.

Hygienic Influences.—Occupation, Residence in relation to Light, Temperature, Moisture, Miasm, Habits of Exercise, Quantity and Quality of Food, Intemperance.

Hereditary Influences.—Age of Parents at Patient's Birth; their habitual state of health and diseases. Collateral relations.

Previous Diseases.—Chronic—Scrofulous, Swelling of Glands, Caries, Affections of Joints, Ophthalmia, Cutaneous Eruptions, Worms, Syphilitic Diseases, Use of Mercury, Rheumatism, Gout. Acute—Fevers; —continued, Remittent, Intermittent, Eruptive Fevers, Local Inflammations, Cholera.

Habitual State of the Functions.—Digestion.—Appetite, Existence of Oppression, Pain, Constipation, &c. Respiration—Frequency and duration of Catarrhs, Dyspnœa, Cough, Expectoration, Hæmoptysis. Circulation—Character of Heart's Action, Pulse, Lividity. Calorification—Susceptibility to Cold, Temperature of Extremities. Secretion—Œdema, Transpiration, Urinary Function. Nutrition—Weight at different periods, Innervation. Reproduction—Epoch of Puberty, Functions of Reproductive Organs, Number of Pregnancies, Parturition, Lactation.

History of the Present Disease.—Supposed Epoch of Invasion; probable causes, existence and nature of preliminary symptoms, causes and nature of morbid changes or parts specially implicated; state of the other functions or parts since commencement of the disease. Diagnosis and Prognosis.

Obvious Conditions.—Attitude, Expression, Voice, Intellectuality, Sensibility, Mobility, State of the Pupils, Hearing, Color, Temperature, Nutrition, Œdema, Moisture of Surface, Mode of Respiration, Character of Discharges or Secretions Revealed by Instrumental Examinations, Lactation, External Lesions.

Digestive System.—The Tongue;—Manner of Protrusion, Tremor, Color, Form, State of Papillæ, Indentations; Character of Secretions on Tongue and Teeth, Taste in Mouth, Appetite, Thirst, Deglutition, Nausea. Pain and Tenderness at Epigastrium, and in Abdomen. Character of Matters vomited. State of Bowels; Meteorism, Ascites, Tumors. State of Liver, Spleen, &c. Rosepots, Petechiæ or Sudamina, Alvine Evacuations.

Secretions—State of the Skin. Urine,—Quantity, Color, Odor, Sediment; Chemical Character,—Acid, Alkaline, Coagulability.

Circulating System.—Inspection of Præcordial Region; Pulse, Auscultation of Heart's Action, Sounds, Frequency, Force, Extent, and Rhythm. Auscultation of Arteries and Pulsating Tumors. State of Veins and Character of Blood, if any has been drawn. Percussion.

Respiratory System.—Frequency and Character of Respiration;—Thoracic, Abdominal, Laborious, Noisy, Cough;—Frequency, Character, Pain in Thorax;—Seat, Character, and Sources of Aggravation. Expectoration;—Facility, Quantity, Color, Tenacity, Aeration, Transparency. Form of Chest,—Inspection, Mensuration, Comparative Movements. Auscultation. Percussion. Succussion. Voice.

It is obvious from the foregoing, that a record of abnormal conditions only, is contemplated. The object being to so arrange the SOURCES OF DIAGNOSIS, that everything of importance may be considered, but not noted unless there is a departure from the normal state.

A full record of some cases will require more space than is afforded by the appropriate column, but such cases will generally be deficient in symptoms provided for under other Headings; the lines therefore may be written across without confusion. Again, as the Headings of the pages under "The Present State of the Patient" are all alike, cases of long continuance may be carried forward to new pages, or to pages unfilled by cases of short duration.

With this understanding, and by the use of such abbreviations as any one can adopt, there appears to be ample provision for a full record. And as the book is adapted to continuous use, it may be exhausted and a new volume commenced at any season of the year."

Seventy-one such double pages are given, followed by additional blank leaves; for microscopical examinations (4 pages,) obstetrical engagements (4 pages,) vaccination engagements (4 pages,) consultation and other professional engagements (4 pages,) list of nurses and address (2 pages,) meteorological observations and endemic influences (4 pages,) miscellaneous memoranda (6 pages,) index of diseases (2 pages,) and index of patients (2 pages.) One fault here to be found is, that the pages are not numbered. To page the book, would

have been an easy matter to the printer, but is one of great inconvenience and trouble to each physician who uses it; and we trust that the publishers will see the propriety of profiting by the suggestion in the issue of their next edition.

Lindsay & Blakiston's Visiting List is designed for a business record of practice; as Baillière's, for a scientific one. Neither of these supersedes the use of the other; used conjointly they admirably complete each other's deficiencies, and enable the physician to keep a very convenient and clear account of his practice in both points of view. L. & Bl.'s little book is the pioneer of its kind in America. It is the most extensively patronized; and, indeed, is so well known to the profession, that a detailed description in this place seems uncalled for. We will only say that, besides the convenient supply of blank leaves, for recording the visits made each day, and for various other memoranda, it contains six pages of printed matter, four of which serve as a prompter to the memory, in cases of poisoning and asphyxia, the remainder being appropriately taken up by an almanac, a table of signs, and a table for calculating the period of utero-gestation.

Townsend & Co.'s publication is designed to combine a business and a scientific record; but in this attempt it fails in many particulars of being near as practical and useful, as both or either of the two preceding. Its arrangement is too complicated, and the space for symptoms and treatment is entirely inadequate. Yet it is not only in its blanks, but more especially also in the great amount of its printed matter, far more complete than either of its compeers, and will prove a valuable companion to the physician, who can properly estimate its character and discriminate between its commendable and objectionable contents and features. In the first place, its name is a misnomer, at once prejudicial to its scientific estimation; in the second place, the regularly educated physician will hardly ever look at its classification of diseases. But passing by the objectionable features in the *general character* of the book, we come to some special objections and suggestions. We have highly praised and recommended it in these pages since its first appearance, willingly believing in its promises of improvement from year to year; and in again presenting it to our readers' notice, we deem it our duty to examine how far these promises have been fulfilled. In its preface it claims to be "by far the most useful manual of its kind to the intelligent physician." Now, medical science, and consequently, "practice" thereon based, is progressive, and its "Hand-Books," if imperfect in the beginning, will hardly attain perfection by being annually reprinted from stereotype plates.

The expense of altering such plates has proved a great drawback on the introduction of improvements, and is the source of many inconveniences. Thus, we find in the second edition, for 1858, a promise of doing away in the next with the letters after numbers in the list of remedial agents, there apologized for by want of time to renumber, etc. This "time" has, however, not yet been found. Other instances could be given. This fault of want of correction is still more glaring on examination of the edition before us as compared with that for 1860. Indeed, it would seem that the only change accomplished in this "*revised* edition," as the good-natured and confiding publishers unsophisticatedly announce it, is the omission on the title-page of the name of the co-author. The inattention, or perhaps we should say, indolence displayed, is carried so far, that we may notice even the typographical imperfections and errors that escaped correction last year, faithfully reproduced by the (*un*) "revised" stereotype. Besides, the table of contents still stares us in the face with "Calendar for 1860," and the careless paradoxical lapsus "Appendix, containing omissions and additions;" and so on all through the text. Instead of "the engraving of a very perfect Obstetric Calendar," promised last year, we still have the brief table for calculating the period of utero-gestation, introduced in Lindsay & Blakiston's Visiting List, &c. Entertaining, as we do, an opinion favorable in most respects of the "Hand-Book," we have made these strictures in the interest of the work itself, and of those for whom it is intended, trusting that they may stimulate the editor to a little wholesome exertion, and the publishers to a little as useful watchfulness in the next "revised edition." Having last year informed our readers of its contents, and finding nothing in the copy before us that was not in last year's edition, we only repeatedly call attention to the value of having in such a convenient and compact form so much matter of profitable reference. In spite of its faults, we warmly commend it to an increasing circle of patrons as the visiting list we ourselves shall use, and which we regard as the best of all of which we know.

As to externals, the three books under consideration are alike in being of pocket-book form, with tucks, place for pencil, and pocket for loose papers. In size, Lindsay & Blakiston's, and Townsend's, are preferable, Baillière's being a little too wide. In quality of paper, in printing and ruling, and altogether, in beauty and elegance of style of getting up, Townsend's deserves the palm. In durability of binding, a very important particular, all three are passable, but neither of them comes quite up to our standard; Baillière's approaches nearest.

The price of Townsend's is $1.25; of Baillière's, 75 cts.; and of Lindsay & Blakiston's, 75 cts., with varying prices for varying sizes and bindings.

The Pocket Anatomist. Being a Complete Description of the Anatomy of the Human Body. For the use of students. By M. W. HILLES, formerly Lecturer on Anatomy and Physiology at the Westminster Hospital School of Medicine, etc. Philadelphia: Lindsay & Blakiston, 1860.

When we tell the reader that the size of this book is five and a half inches by three, with half an inch in thickness, he will at once understand the fitness of the first part of its title; when we further tell him that it contains 263 pages, all told, of minion print, making, on a rough calculation, but little over 300,000 "ems," he will perhaps as readily understand the unfitness of the word "complete," in the second part. After this fault-finding, we are in duty bound to add, however, that this is about all the fault-finding Mr. Hilles has laid himself liable to. Keeping his aim constantly in view—to convey to the student concise information of the structures and functions of the human body, to direct his attention to the most important points connected therewith—he has prepared a work unsurpassable in its own little way. We are not of those who object to compendious manuals or pocket-books for students when they are kept in their proper province; and if there is any branch of medical study in which they are essentially useful, it certainly is Anatomy, in which so much depends on memorizing. From the author's preface, for the little volume before us is a republication, we learn that there is still a very inadequate supply of subjects for dissection in the "United Kingdom," an obstacle happily surmounted at the flourishing schools of this country. If we were again in our student days, we would not wish, as to Anatomy, a better text-book on our table, than the recently published work by Prof. Leidy,* nor a better memorandum-book in our pocket than Mr. Hilles'. It is a very good plan, and one we recommend every student to follow, to keep such a little pocket-book constantly with him for self-examination and refreshing of his memory at all spare moments, in his walks and rides through the city, while waiting for lectures, &c., &c. And we can sincerely urge that the "Pocket Anatomist" will prove a profitable companion to every student, while laying the foundation to that knowledge which itself forms the foundation of Medicine.

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* For a review of this work see MONTHLY, *Jan. No.*, 1861.

An Epitome of Braithwaite's Retrospect of Practical Medicine and Surgery—containing a condensed Summary of the most important cases; their treatment, and all the remedies and other useful matters embraced in the forty volumes—the whole being alphabetically classified, and supplied with an addenda, comprising a table of French weights and measures, reduced to English standard; a list of incompatibles; explanation of the principal abbreviations occurring in pharmaceutical formulæ; a vocabulary of Latin words most frequently used in prescription, and a copious index. In six parts. By WALTER S. WELLS, M.D. New York: C. T. Evans.

This lengthy title perfectly explains the scope and intent of the work. But little remains for us to do. That little is to speak of the manner in which the plan proposed is carried out, and of the general usefulness of such a work.

Nearly every language has its corresponding work for its own medical literature. The annuals, year-books, &c., which have appeared regularly for many years past, in various countries, prove that there is a demand for such literature, and the demand signifies a need upon the part of the profession. The large sales of the reprints of Braithwaite's Retrospect and Rankin's Abstract in this country show that the profession here is no exception to this general rule. The Retrospect now constitutes a library in itself, its forty numbers, embracing a fair *résumé* of the medical literature of England, France, Germany, and partially so of this country, for a period of twenty years. This is now too voluminous for the shelves and the purse of those who have not been yearly supplied with the volumes. The Epitome condenses these forty volumes into six, and conveniently arranges the articles in alphabetical order, thus facilitating reference. The labor has been a tedious one, but from the examination we have given of the Epitome, it cannot prove otherwise than acceptable to both those who have the forty volumes, as well as those who have not.

A Dictionary of the English Language. By JOSEPH E. WORCESTER, LL.D. Boston: Hickling, Swan & Brewer. 1860.

Worcester's Dictionary has been for some months upon our table, and should have been noticed before, but for the crowded state of our pages. We have both Webster's and Worcester's Dictionaries; and, after a careful examination of these rivals for popular favor, we have no hesitation in giving our preference to the latter. Worcester's

Dictionary is truly an encyclopædia of itself; we have not sought for a word pertaining to literature, science, or art, without finding it, and correctly defined. Worcester's Dictionary has better type than Webster's, has larger pages, and more of them, the illustrations are equally good, and the words and illustrations are to be found in their proper places. Worcester's contains more words than any other English dictionary, and the definitions are accurate and concise. We believe it to be the most accurate and complete Dictionary in the English language; and to those who are in want of a volume of the kind for daily reference and consultation, we would most cordially recommend it. No greater praise can be given than the following opinion of William Cullen Bryant: "The new and authentic etymologies, the conciseness and completeness of the definitions, the nicety with which the different shades of meaning in synonyms are distinguished, and the conscientious accuracy of the work in all its departments, give it, in my judgment, the highest claims to public favor." O. C. G.

EDITORIAL AND MISCELLANEOUS.

— Once more it becomes our duty to greet the readers of the MONTHLY at the close of the year. With this number, the *fourteenth* volume of the journal is completed, and it is with no small degree of satisfaction that we look back upon its well-filled pages and recall the many hopes we have had fulfilled, the many anticipations we have seen realized. The two volumes included in the year, together, contain over 1,000 pages of reading. An extra number, embracing the first four lectures of Dr. Dalton, was issued in April, and was sent to all paying subscribers upon the receipt of three dollars for the year's subscription. If any who have paid should have failed to receive this extra number, by informing the editor, the omission will be supplied.

The course of our labors has not been altogether smooth, nor free from trials. The complaint which seems to have visited all our contemporaries has also touched us. It is an epidemic which, within the time of our editorial career, has proved fatal to many a flourishing medical journal, and brought its editor to lament his confidence in a smiling future full of golden expectations. We believe we have done our duty to our subscribers, have given them substantial entertainment, and we believe it to be their duty, as men, to be as honest towards us. If the journal is not desired by those who have not helped

us to pay its expenses, let them have the kindness to tell us so; and if they find that it meets their wishes or their wants, they will, by promptly paying, do much to insure greater improvements, a fuller harvest from the pens of our own medical writers, and richer gleanings from the granaries of the Old and New Worlds. Be true to us, and we will, on the other hand, be faithful almoners of your bounty.

We hope, by the aid of our subscribers, to enter into such arrangements with medical writers in different parts of our country, as to insure a better volume the next six months than we have as yet given. Our intention is always to improve, and we only need that recognition of our efforts, which, while it lightens our heart, makes our purse heavy, to carry all our plans into successful execution.

— The *Nashville Medical Record*, which had failed to reach us for two months past, has this month reappeared in a new form. Instead of the octavo form, it has assumed a quarto size, and resembles in style and general typographical dress the *American Medical Times*. Prof. WRIGHT, one of its earliest editors, has retired from the journal, which will hereafter be conducted by Profs. ABERNATHY, MADDIN, and CALLENDER, all of Shelby Medical College.

— Two new Medical Journals are announced: the *Baltimore Journal of Medicine*, to be published bi-monthly, and to contain 100 pages, at least. Dr. Edward Warren, Prof. of Materia Medica and Therapeutics in the University of Maryland, is to be the editor. The other is the *Berkshire Medical Journal*, to be published under the auspices of the Berkshire Medical Society, and to be edited by Drs. Wm. Henry Thayer and R. Cresson Niles, both Professors in the Berkshire Medical College.

The first number of these new journals will be issued in January.

Union of Wounds of the Scalp Effected by Means of the Hair, instead of Sutures. By H. G. DAVIS, M.D., New York. MR. EDITOR: In your journal for November, I notice a mode of uniting the lips of wounds of the scalp by using the hair upon the edge of the wound, in the place of sutures. With your leave, I will give in your journal a plan adopted by me, which differs somewhat from that mentioned by Drs. Campbell and Pitts:

The hairs upon the edge of the wound, to the distance of one-sixteenth of an inch from the edge, are separated from the other hairs, combed straight, then cut off, leaving the portion attached to the scalp about an inch long. These are to be laid upon the adhesive surface of a strip of adhesive plaster about two inches long, of any

width you choose, according to the direction you carry the plaster that is to be attached to it. After the hair is pressed down upon the adhesive surface, another strip is to be applied over it of the same width, and of sufficient length to pass over the head to the skin beyond the hair—as upon the forehead, temples, or back of the ear—when it can be secured to the skin. This arrangement of the hair upon the adhesive plaster enables the surgeon to bring the edges of the wound in perfect coaptation without the slightest irritation. To illustrate the application, I will state a case:

A gentleman was thrown over the side of his carriage into the road, striking the anterior and superior portion of his head upon a sharp stone; the scalp was divided to the length of four inches and a half—the cut being of a crescent shape—and separating the scalp from the side of the head to the depth of two and a half inches. The wound was filled with gravel and the loose hairs divided by the stone.

The wound was carefully cleansed by squeezing warm water from a sponge upon its surface, and the hairs removed, as far as possible, without touching the parts. When every foreign substance was removed, the flap was brought to its place, and secured upon the opposite side of the head; a cold water compress was kept applied. At the end of twenty-four hours, the separated scalp was found to have united perfectly by the first intention—no suppuration taking place at any point. Let me add, that no mode effecting the coaptation of parts will secure union by the first intention where the exposed surfaces have been rubbed with a sponge, or otherwise irritated.

Dislocation of the Femur into the Thyroid Foramen. By Silas Hubbard, M.D., Hudson, Ill. Messrs. Editors—As it is still a novel method of reducing laxation of the femur downward, according to Reid's method of reducing dislocation of the os femoris on the dorsum, ilii, &c., I am induced to believe even one case might be of some interest to your readers, and would add a little to the stock of useful knowledge; therefore I will as briefly as possible relate the following case, which came under my own observation:

August 17th, 1860, I was called to attend Mrs. L———, forty years of age, who had been thrown from a horse; she was taken up helpless. I arrived soon after the accident, and found the right limb distinctly inverted, and on measurement, one and one-fourth inches longer than its fellow, with all the signs of dislocation of the head of the femur downward into the obturator foramen; I informed her friends of the nature of the accident, and also that the left hip was also badly sprained, and that to produce the accident she must have

fallen on her lower extremities while they were very much abducted; and according to their wishes, I proceeded forthwith to reduce the dislocation. I called no assistance, neither did I give any anodyne, neither did I change her position on the ordinary bed she lay on; she was lying on her back, on the edge of the bed; I seized the ankle with my right hand, and just above the knee with the left hand, and flexed her leg on the thigh, and in this way strongly adducted the limb over the opposite one, and caused it to sweep over the abdomen in a circular manner, continuing the movement till the limb was strongly abducted, and then fetching it down, while abducted, in a gentle and rotary manner. All present had the satisfaction of hearing the dislocated limb slip in its proper place and all deformity disappear, the patient expressing herself very much relieved. I put the limb in a straight counter-extending splint for three or four days; she began to walk in about thirty-five days, and recovered as fast as is usual in such cases.

HUDSON, ILLINOIS, November 26th, 1860.

— Dr. Mercer Adam, whose "Medical Notes from the Continent" we have at various times taken from the *Edinburgh Medical Journal*, has resumed the series in the July number of that journal by a description of the Hospitals of Munich. We select for this month his notes of the *General Hospital of Munich:*

It contains 54 small wards, each having 12 beds, and between 40 and 50 private rooms for patients who can afford to pay a higher rate for their board. A suite of these separate rooms is reserved for the accommodation of any of the court-servants who may fall ill, where they are treated and maintained at the expense of the king. Other chambers are specially appropriated to sick students of the University and Art-Academies, etc. The wards are about 38 feet long, 24 feet wide, and 14 feet high; and each patient, supposing all the twelve beds to be occupied, has a supply of 1135 cubic feet of air. This is rather a scanty allowance of air compared with that in the wards of most institutions; thus in Guy's Hospital there is a cubic capacity of from 1600 to 1800 feet per head, and in most of the French military and civil hospitals each patient has a supply of fifteen hundred feet, which is regarded by sanitary authorities as the minimum quantity necessary for the health of the inmates. But the statistics of the Munich Hospital, as we shall presently see, show a very low rate of mortality, which is probably attributable to the existence of a very efficient system of ventilation, which compensates for the defective size and capacity of the wards. The ventilating apparatus in use was invented by Dr. Häberl, a very ingenious man, who was appointed head-physician and director of the hospital on its being opened in 1813. It consists of two parts: the one a suction-pipe, which abstracts all the foul atmosphere from the wards; the other a ventilator, by the pressure of which a greater or less supply of fresh air is introduced into the cham-

ber, according to the season of the year, the number of occupants, etc. The apparatus possesses many advantages; it is entirely self-acting, requiring no superintendence or regulation by the nurses, and the medical men report very favorably on its simplicity and efficiency. Another circumstance, which has doubtless contributed to the salubrity of the wards here, (as at Berlin and in all the other hospitals where I have seen it used,) is the varnishing of the floors of the ward with a composition of linseed oil and litharge, which invests the porous wood with a hard shining coat. Floors thus varnished are unaffected by the temperature; they are easily kept sweet and clean; and they are quite impervious to all foul discharges or unpleasant fluids which may be accidentally spilled upon them. The varnish is also very durable; it is only renewed once a year in Munich Hospital, except in some of the clinical wards, where it requires to be applied half-yearly, as it is quickly worn away by the feet of the crowds of students who daily cross these floors. Everywhere that I have seen it used, the physicians have spoken to me in the highest terms of the increased freshness and salubrity which it imparts to the wards. Skoda's clinical wards are the only varnished floors in the Vienna Hospital, and they always smell sweeter than any of the others in the building. Miss Nightingale, in her evidence before the Army Sanitary Commissioners, as well as in her recently published work on the construction and management of hospitals, recommends the adoption of some such varnish for the floors of Army Hospitals; so, in the hope that it may prove useful to some of my professional brethren, who may wish to try it in their wards, I append the receipt for the manufacture of the preparation.*

All the lobbies and corridors throughout the house are paved with triangular slabs of a cream-colored lime-stone, which is very hard, and carries as high a polish as Dutch tiles.

The private rooms are neatly fitted up with furniture of cherry and walnut woods, and in each there is a bell which sets in motion an "indicator" in the corridor, to enable the patient to summon his attend-

* This varnish is prepared by dissolving finely powdered litharge in boiling linseed oil, stirring the mixture constantly during the process. When the oily compound is removed from the fire, some drying material *(seccatif)* is cautiously added, and the whole is stirred to prevent it from being burned or blackened in the vessel. The varnish requires to be warmed before use, to insure its perfect fluidity, and it must be well stirred before its application to the floor. I append a note of the quantities of each ingredient used in Munich Hospital for the preparation of sufficient varnish for the floor of a ward 38 feet long and 24 feet broad. I have reduced the original weights (Bavarian standard,) which are given within brackets, into our English apothecaries' measure; and I have also added the cost of the ingredients in Germany:

				s.	*d.*
Linseed oil	℥Lii.	[3½ lbs. Bavn.]	costs about	1	9
Litharge	℥xi.	[2 Loth. 3 Qt.]	"	0	0½
"Dryer"	℥xi.	[do.]	"	0	1½
Cost of labor,	. . . . .			1	8
Cost of varnish for ward of 912 cubic feet,				3	7

I do not exactly know what is the composition of the *seccatif* or *dryer* which is used, but I presume it resembles the substance known in English commerce by the name of "Patent dryer."

ant. The cost of residence and treatment in the hospital varies according to the accommodation furnished; patients who occupy private rooms, pay according to the size, situation, and furniture of the apartment, from 1s. to 2s. a day. The charges are about one-fourth higher in the winter than in the summer months. The hospital possesses a good many "foundation beds," which entitle their founders to recommend patients all the year round for gratuitous residence and treatment. One of these beds can be founded by a donation to the hospital funds of a sum capable of yielding a clear annual income of 100 florins, or about L.8, 10s. sterling.*

A long underground passage conducts from the hospital to the dead-house and *post-mortem* rooms, which are clean, excellently appointed, and well ventilated. Separate vaults are also provided here for the corpses of those who may die of contagious diseases. Cases of small-pox are not received into the general hospital, but are treated in a separate building within the grounds, where they are completely isolated from the other patients.

The staff of the hospital comprises a director or superintendent, four principal physicians, seven assistant physicians, and one medical officer for the care of the small-pox cases. Professors Pfeufer, Ringseis, and Gietl, are the clinical physicians; Professor Rothmund teaches clinical surgery; and a syphilitic *clinique* is conducted by Professor Horner. Professor Buhl, the eminent pathologist, and Dr. Lindwurm, of whom I have spoken, are both ordinary physicians.

The nurses, with one or two exceptions, are Sisters of Mercy, of whom there are sixty, with a superintending superior, attached to the hospital. This order is a very extensive one in Bavaria, where it was established in 1832. In 1854 it possessed no less than 46 religious houses, and numbered 236 professed sisters, 82 novices, and 42 probationary candidates; in all, 360 members. About 300 of these sisters are employed as nurses in hospitals, or as attendants in other charitable institutions. In some places, as in Munich, they are allowed to act as nurses in private families. They are excellent nurses, from having been carefully trained in all the duties of a sick-room; and they keep the wards, the linen of the patients, etc., exceedingly neat and clean. Being all, more or less, women of education and refined feelings, having been properly educated in all that concerns the care of the sick, and being under the immediate control and supervision of a responsible superior, they are calculated to be more efficient than hired nurses. Their duties, having been undertaken from motives of charity and religion, and not from a mercenary spirit, are likely to be performed more conscientiously than if rendered by mere hirelings. The value

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*It must be recollected that German hospitals are conducted with great economy. Dr. Grätzer of Breslau states, that among the German Hospitals (not in Prussia), the average cost of each patient is highest in Hamburg and Vienna (about L.1, 11s. per head;) it is less in Dresden and Prague (about L.1, 7s.;) while in Munich, each patient only costs from 17s. or 20s. during his average residence of sixteen or seventeen days in hospital.—*Wiener Med. Wochenschrift*, December, 1854.

of trained sisters is becoming more and more acknowledged. All over the continent, institutions are being established for training Catholic Sisters of Mercy and Protestant Deaconesses for the duties of nurses;* and even in our own country a feeling is daily gaining ground that the sick in our hospitals might be more advantageously committed to the care of refined and educated Christian women, than to the tender mercies of the ignorant Mrs. Gamp.

The average number of patients treated annually in Munich Hospital is upward of 7000; but during the cholera epidemic of 1853–4 as many as 9271 were treated during a year. The rate of mortality is very low, being about one in every twenty treated.† It rose as high as one in twelve during the cholera year, and also in 1836–7, when there was an epidemic of influenza in Munich.

I cannot recall to mind any cases of special interest in the wards at the time of my visit. I saw many cases of the endemic typhoid fever of Munich, as well as of the remittent fever so common in the neighboring plains. The endemic fever of Munich resembles that variety so well denominated *pythogenic* by Dr. Murchison. It arises from the foul smells which shock the nose in many of the alleys of that city, and from the malaria produced by decomposing organic matter which has not been adequately removed by drainage. It is most prevalent during the months of February and March; but few strangers can reside for six months in Munich without being more or less attacked by it. It is ushered in by rigors; the pulse becomes quick and soft, and the tongue dry and brown; crops of characteristic rose-colored maculæ appear between the seventh and fourteenth days; there is abdominal tenderness; and, in fatal cases, the glands of the ileum are generally found to be ulcerated. Delirium is rare in the course of this fever. I saw one case in which head symptoms had appeared, and Dr. Lindwurm assured me that these were a very unusual complication. Critical discharges frequently occur, in the form of diarrhœa or epistaxis. The latter, when moderate, is regarded as rather favorable to the patient; but when the hæmorrhage is great it is arrested by means of pledgets of lint saturated with the Sol. Ferri Perchlorid. In the treatment of this fever gentle febrifuge salines are prescribed at first, and plenty of strong *bouillon* is given to keep up the strength. As soon as the state of the tongue will warrant its use, quinine is administered, in doses of one or two grains every four or six hours; and under this mode of treatment the majority of the cases do very well.

* "Germany has (1854) nine training establishments for deaconesses; Southern Germany has two, at Carlsruhe and Stuttgard; Northern Germany five, at Berlin, Breslau, Königsberg, Stettin, and Ludwigslust; and Central Germany two, at Kaiserwerth on the Rhine (where Miss Nightingale received much of her experience,) and Dresden. France has two, at Paris and Strassburg; Switzerland two; the Netherlands one, at Pittsburg; and Sweden one, at Stockholm." —From the *Armen und Krankenfreund*, May and June, 1854; a journal edited by the Rev. Herr Fliedner, inspector of the Kaiserwerth establishment.

† Speaking of the German hospitals, Dr. Grätzer says (*loc. cit.*:)—"In the hospitals of Dresden, Prague, Berlin, and Vienna, the mortality is 1 in 8; in Breslau 1 in 9; in Dantzic and Hamburg 1 in 12; in Cologne and Königsberg 1 in 13; and, lowest of all, in Munich hospital 1 in 21."

— Dr. Niles, of Lockport, N. Y., suggests that the operation for amputation through the continuity of the metacarpal bones, performed by Dr. A. P. Smith, and republished in the September No. of the MONTHLY, is not new, as has been supposed, but really quite old. By reference to Velpeau's Operative Surgery, it appears that this operation was not unknown to the ancients. After referring to various authorities who have recommended it, he remarks: "I cannot, in fact, understand why the transverse section of the metatarsus, rather than its disarticulation, should not have the preference whenever the disease admits of this operation."

— Prof. B. F. Barker recently performed the Cæsarean operation at Bellevue Hospital, on account of a contracted pelvis, the anterior-posterior diameter of the superior strait being only two inches, the cavity of the sacrum filled with a bony tumor. The child was removed alive, and is now living. It weighed nine pounds. The mother died the fifth day after the operation.

Dr. Gibbs' Second Circular.—The undersigned would respectfully tender his thanks to the Editors of those medical journals who have so kindly noticed his proposed enterprise, in regard to the publication of a *Year-Book of American Contributions to Medical Science and Literature.* He is confident that such a work is needed by the profession, and is demanded by the honor of American medicine. In America, there are no *Abstracts* or *Retrospects* corresponding with those of *Ranking* or *Braithwaite.* These, though valuable productions, are in no manner representatives of American medicine. The gleanings in these are almost entirely confined to journal literature, whereas it is proposed to give in the *Year-Book* a synopsis of all medical matters of importance found in journals, Society transactions, monographs, books, &c., pertaining to medicine having an American origin, and published during the year immediately preceding. As stated in a former circular, to fulfill his design, the undersigned wishes all medical journals, Society transactions, and medical books, of recent issue, sent to his address. A few are yet wanting, to which omission he asks the attention of authors and publishers. What he wishes more particularly to say at present is, that he cannot publish without a greatly *increased subscription list.* To American physicians he appeals in behalf of American medicine, and trusts they will promptly respond to his former circular. Otherwise his enterprise must fail for want of encouragement. Subscribers' names, books, &c., to be directed to

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